



United States  
Department of  
Agriculture

# PRAE

PINE RIDGE AGRICULTURE ECONOMY

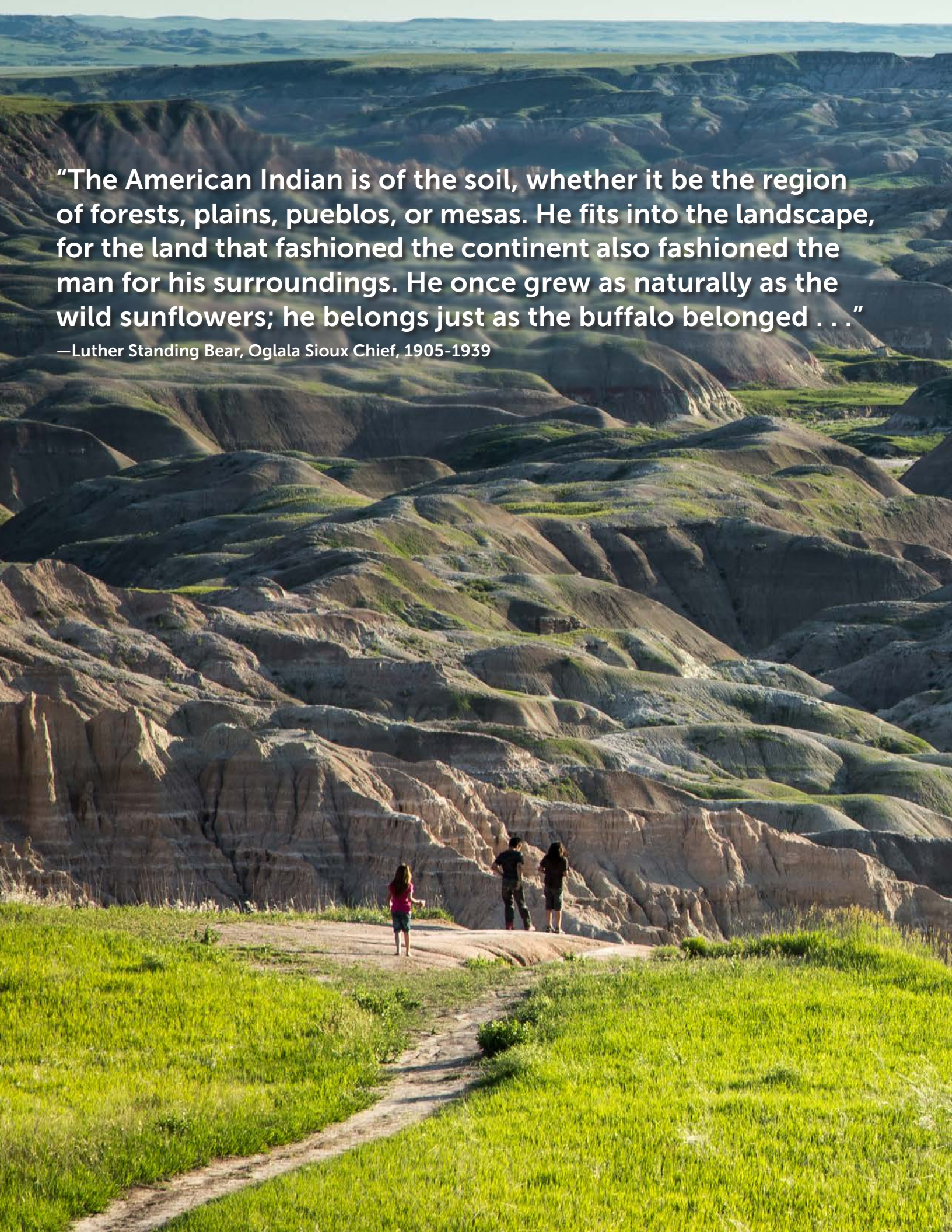


TRIBAL ENTREPRENEUR LOCAL FOODS SYSTEM



**"The American Indian is of the soil, whether it be the region of forests, plains, pueblos, or mesas. He fits into the landscape, for the land that fashioned the continent also fashioned the man for his surroundings. He once grew as naturally as the wild sunflowers; he belongs just as the buffalo belonged . . ."**

**—Luther Standing Bear, Oglala Sioux Chief, 1905-1939**





# Table of Contents

Concept Summary.....	4
Introduction .....	12
Production .....	18
Service and Marketing Cooperative .....	24
Value-Added Processing.....	30
Attachments .....	35
Attachment 1	
Economic Impact–High Tunnel Production .....	36
Economic Impact–Job Creation.....	37
Attachment 2	
Economic Impact–Local Impact Output Multipliers .....	38
Attachment 3	
Production Resource–Food Sovereignty and Community Gardens.....	39
Attachment 4	
Production Resource–South Dakota State University	
Beginning Farmer and Rancher Program .....	40
Attachment 5	
Production Resource–Oglala Lakota College.....	42
Attachment 6	
Production Activity–Buffalo Cooperative .....	44
Attachment 7	
Resource–Lakota Funds.....	45
Attachment 8	
Resource–USDA Food System .....	46
Attachment 9	
Resource–USDA Natural Resource Conservation Service .....	48
Attachment 10	
Resource–USDA Farm Service Agency .....	50
Attachment 11	
Resource–Value-Added Agriculture Development Center.....	53
Resource–Buffalo Resource Cooperative .....	54



### What is PRAE?

The Pine Ridge Agriculture Economy (PRAE) concept has been developed to enhance the economy of the Pine Ridge Indian Reservation (Pine Ridge) through job creation. PRAE is an initiative designed to allow families maximum control and greatest net return while utilizing the newest technology, effective value-added techniques and powerful marketing strategies. In order to do this, the PRAE model must first provide an acceptable standard of living to support self-sufficiency, which has been defined as equivalent to a \$20 per hour position or \$40,000 per year net income.

Additional assumptions presume:

- additional agricultural production will be consistent with the method of land resource allocation currently used by the tribe,
- incorporation of sustainable and natural resource conservation practices, and
- emphasis on attracting young and beginning farmers.

### Pine Ridge Quick Facts\*

57,840

square miles,  
crossing three  
counties

1.32

million acres are  
*Land in Farms*  
operated by  
American Indians

48%

of Pine Ridge  
households have  
an income of  
\$30,000, or less

Poverty rate  
lingers around

50%

Scarcity of jobs  
contributes to a  
stagnant economy

Farms mostly  
consist of corn,  
wheat, and  
beef cattle



# Why Participate in PRAE?

Engaging producers in Pine Ridge to participate in the PRAE concept can result in significant economic gain, as well as health benefits. Establishing a food system that spurs job creation, increases agriculture production, creates sustainable food processing, marketing income, and provides access to a healthy food supply can have a far-reaching impact. For these reasons, PRAE will support existing resource entities and individual collaboration efforts, as well as, introduce additional USDA and private programs to promote the high-value food system initiative.

## Three critical components maximize economic impact to the Pine Ridge economy through agricultural production:

- 1 Recruitment, coordination, and training of high-valued fruits, vegetables, and livestock food producers willing to work together, aggregate production, and market through a Native American branded food distribution system.
- 2 A food processing facility with workers skilled in processing, value adding and packaging high-valued fruits, vegetables, and meats that meet food safety requirements, brand criteria, and consistent product quality that exceeds consumer expectations.
- 3 A marketing cooperative to research customer opportunities based on member production. The cooperative will act as the producer member agent in aggregation, Native American branding, sales, and distribution of high-value food products to domestic and international markets.

## The comprehensive PRAE concept centers on production of 150 producers.

While this may seem quite ambitious, commitment to a long-term strategy puts the model in a position to attain the desired level of producer membership. Many resource partners have been present on Pine Ridge for several years and intend to maintain their supporting services into the future. Once initial producers begin to realize profitability, it is expected that they will champion others who also want to earn a self-sustaining income. Many of the Pine Ridge youth, who want to build a better lifestyle, can also contribute to building producer capacity.



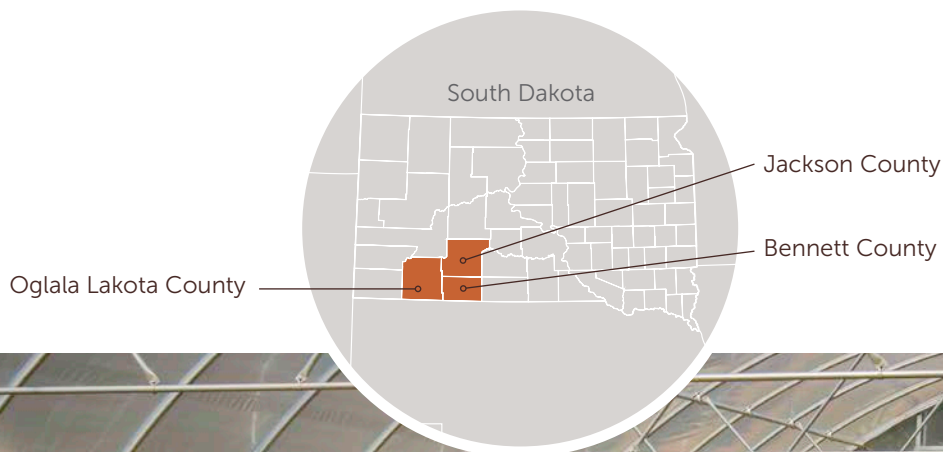


## What are the Project Goals?

The USDA-led PRAE initiative is concentrating on enhancing the economy by creating agriculture production and affiliated agribusiness opportunities in Oglala Lakota (formally Shannon), Bennett, and Jackson counties located on Pine Ridge, a designated low-income, food desert, unserved, and underserved population of the state. Agricultural producers make a noticeable contribution to South Dakota's local economies. The influence is augmented when they move from producing commodities to processing value-added products.

PRAE gives grower operations this option through membership in a service and marketing cooperative that manages producer education, product aggregation, value-added processing, distribution, and branded marketing undertakings on behalf of the producers. To the family farm business it is like a *food processing and marketing franchise business* that allows them to focus on growing food while outside resources, such as cooperatives, undertake production and selling of the Native American branded value-added food products into local, domestic, and international markets. Furthermore, it increases producer profitability by generating a \$20 per hour wage, similar to other jobs on the reservation.

### Pine Ridge Indian Reservation



The family farm business is like a food processing and marketing franchise business that allows them to focus on growing food while outside resources take on the making and selling of the Native American branded value-added food products.



## PRAE Strategies to Collaborate with Partners

- Equip beginning and expanding agriculture producers with skills—through delivery of technical assistance and outreach, including business planning, an operations manual, workshops, and resource access—needed to generate a minimum of \$40,000 annual net income by growing high-quality fruits, vegetables, and livestock.
- Finance producer operations, both individually and at the business level.
- Provide technical assistance and financing for value-added food processing.
- Market tribally produced, proprietary branded Native American products to domestic and international consumers.
- Establish a tribal food system cooperative framework that can be adapted to other projects.



## What Are the Barriers?

- Lack of an economic driver for widespread public understanding of the concept.
- Participant buy-in: marketing cooperative management; tribal vs. entrepreneurial leadership.
- Tribal buy-in: management of critical land resources through land leasing.
- Cultural buy-in: hesitancy to engage in a capitalistic system based on Western ideas.
- Current practitioners viewing this concept as competition for ongoing local food vision, food sovereignty, or subsistence farming.
- Misconception that if producers fully embrace selling food as a business, it would create a food drain on Pine Ridge and leave families without safe food access.
- Insufficient technical knowledge of food production.
- Minimal expertise in using branding and value-added principles in local community.
- Limited resources for all three-concept segments—capital for local producers, processing, and marketing cooperative startup.

## Some Opportunities to Remove Barriers

- Incorporating concept in the Comprehensive Economic Development Strategy (CEDS) process—educating public and political leadership while encouraging input.
- Demonstrating to current practitioners that their efforts will be leveraged by increasing these types of food production systems on Pine Ridge.
- Dispensing technical assistance by the private sector and USDA to create the capacity needed to successfully develop and operate a service and marketing cooperative to control quality and quantity of production, develop value-added products, strategies, branding, and to find markets for its membership.

**At the heart of our task is education to help bring a sustainable community into being.**

—Gardens for Humanity



# Steps to Implementation

---

## Step 1



Continue to target, find, and recruit growers willing to either grow production or to start a local foods enterprise and participate in existing farmer markets. These steps begin to address local food access through expansion of sustainable utilization of the reservation land-base, while establishing a foundation for the greater economic opportunity to add value to raw product via processing.

## Step 2



Work with tribal government to plan and coordinate sustainable use of natural resources—land, water, and infrastructure.

## Step 3



Create physical and workforce assets to process and add value to food.

## Step 4



Assess cooperative-based aggregated production, processing, marketing, and distribution, which will return profits to local members. Incorporate learning from business planning already underway for a buffalo resource cooperative. Recruit existing and beginning ranchers and deliver technical assistance and funding, allowing their operations to increase the meat supply for value-added processing markets.





## What is the Economic Impact?\*



12,000  
square feet



1 Full Time Job  
@ \$21 hour



Part Time Jobs @ \$12 hour  
552 hours

**\$43,680**

PRAE Family Farm Net Annual Income



x 150 PRAE Producers



**\$7,545,600**

PRAE Farm Wage Impact

\*Estimated economic impact.

The economic impact expected by participating beginning and expanding farmers can be predicted using Iowa State University's high tunnel budget reflecting generally accepted production methods for a typical food producer.

Based on assumptions and adaptation to the PRAE's scope, a multi-vegetable high tunnel enterprise could realize an annual return of \$3.64 per square foot. For example, an area of approximately 12,000 square feet of high tunnel production generates an owner-wage of \$21 per hour, surpassing PRAE's desired net income of \$20 per hour. This equates to four standard-size 30' x 100' high tunnels.

Assuming 150 PRAE producer operations, the Pine Ridge economy will realize an annual \$7,545,600 direct impact from production employment. Producers can expect to capture additional revenue through collaborative incorporation of value-added strategies, such as product aggregation, processing, and niche market branding. Refer to Attachment 1 for high tunnel production annual income scenarios.



The primary tool used to estimate economic impact is a multiplier, which defines the extent to which money spent on goods and services has a “ripple effect” on the economy.

## Economic activity in the food system concept occurs on three levels:

---



### Level 1

---

**Direct**—production of fruits and vegetables,



### Level 2

---

**Indirect**—production inputs such as seed, chemical, services, and utilities, and



### Level 3

---

**Induced**—workers in the direct and indirect segments spend their wages in the community on items such as household goods, fuel, and food.

South Dakota State University’s (SDSU) 2014 study findings show a multiplier range of 1.82 to 1.83 effect for local foods production in southeastern South Dakota. [*Economic Impact Study of South Dakota’s Local Food System: A Survey Study in Southeastern South Dakota*, February 2014 - iGrow SDSU Extension] The Wallace Center supports entrepreneurs and communities in building healthy food systems. Using IMPLAN (regional economic development output model) they generated an average multiplier of 1.84, which supports SDSU’s local food production value. Processing, distributing, and retailing locally produced fruit and vegetables substantially elevates the IMPLAN generated multiplier to 6.31. This translates to an estimated \$47,612,000 economic impact of growing, processing, and marketing local food on Pine Ridge. Refer to Attachment 2 for examples of produce production multipliers.

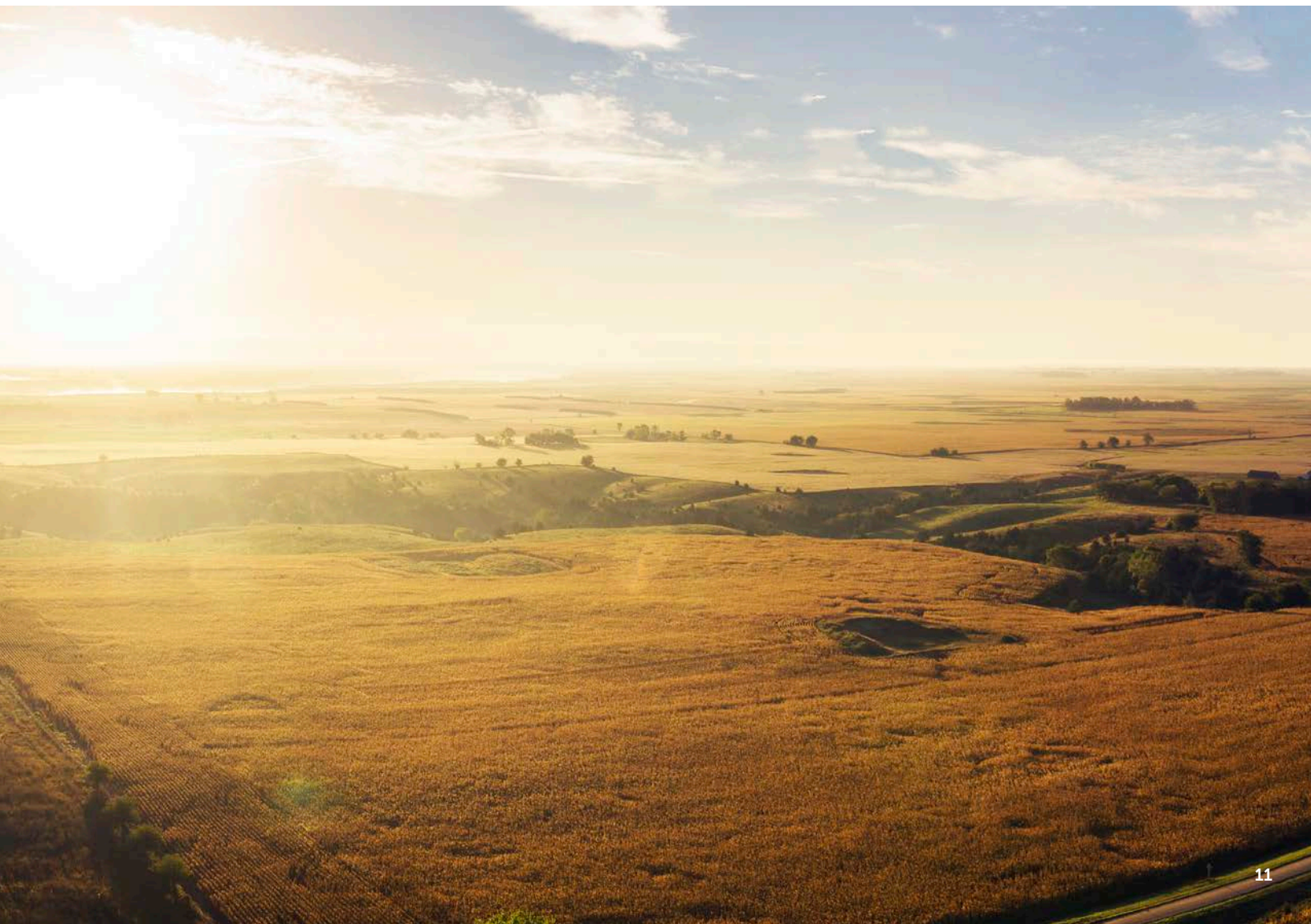


## Conclusion

This project offers tribal members an opportunity to create jobs, increase income, and improve the quality of life across Pine Ridge. The work plan proposes using experienced partners to teach and mentor individuals, producers, businesses, and communities located on the reservation. The project intends to diversify and increase local food growing, livestock production, and traditional food harvesting in a sustainable manner to create value-added processing opportunities and to use the cooperative model for the essential business of creating a marketplace by bringing production, aggregation, value-added, and marketing services to producers. The end result will be an increase in land use, food access, jobs, and income, ultimately elevating economic activity on Pine Ridge to a self-sustaining level.

The scope of this proposed project is large and will take long-term commitment, not only on the part of the Oglala Lakota people but also from participating federal agencies and other partners. This endeavor will take significant funding, but more importantly, require dedicated staff with the time and commitment to see it through.

The end result will be an increase in land use, food access, jobs, and income, ultimately elevating economic activity on Pine Ridge to a self-sustaining level.







## A Focus on Agriculture

A host of local individuals, businesses, nonprofits, tribal, local, state, and federal agencies, among others, are working to improve many aspects of life within the borders of one of the poorest areas of the United States, Pine Ridge. PRAE focuses on the agriculture sector by targeting agriculture production, value-added processing, and niche marketing. This creates an opportunity for young and beginning farmers and existing producers to not only engage in production agriculture, but to capture a larger share of the food dollar for their products. Groundwork is currently building through existing programs that encourage local food production via individual and community gardens, production training, and funding options to support growing food on the reservation. Two farmer markets are taking shape giving growers outlets for their produce and providing residents access to locally produced merchandise.

2013 South Dakota Poverty Level





### Who's Contributing to the Local Food Plan?

- Pine Ridge Tribal Council
- Tribal individuals and businesses
- USDA Rural Development, USDA Farm Service Agency, USDA Natural Resources Conservation Service
- Lakota Funds
- Oglala Lakota College Agriculture Extension Department
- South Dakota State University Extension
- South Dakota Department of Agriculture
- Partnership with Native Americans
- Thunder Valley Community Development Corporation
- South Dakota Specialty Producer Association
- Value-Added Agriculture Development Center



### How Does PRAE Strengthen the Pine Ridge Food System?

PRAE strengthens the Pine Ridge local food system initiative by providing opportunities for diverse producer benefits, such as the sharing of resources and services to enhance profitability. This next step will deliver technical assistance and funding to assess, develop, and implement a value-added food system based on aggregation of production, processing, marketing, and distribution.

Investing in a food system will not only invigorate an area of extreme poverty but also restore a connection to the land through agriculture production.

–Gardens for Humanity

### What is the Goal of the Initiative?

The goal is the creation of a niche Native American brand that will cater to consumer desires, such as:

- Know Your Farmer, Know Your Food,
- Healthy eating, and
- Medicinal and nutraceutical uses.

The nature of the program will encourage the participation of beginning and small-medium sized Native American producers to grow fruits, vegetables, herbs, and crops. Tracts for youth to gain agriculture production skills and business experience, and elders to transfer their knowledge will be integrated into the overall design. It is also probable a livestock tract will be included with an initial focus on buffalo production and marketing.

Producers will come together under a cooperative structure offering needed agricultural production services, as well as value-added product processing, branding, marketing, and distribution. As the cooperative entity strategy develops, it allows for:

- the examination of grower diversity—garden, traditional gatherer, and livestock,
- product variety—fruits, vegetables, berries, herbs, indigenous, seeds, horticulture, meats, poultry grassfed, organic,
- growing options—high tunnel, field, pasture, and
- market expansion—local, regional, national, and international.

## PRAE Helps to Remove Barriers

PRAE partners contribute to a better food system by cultivating opportunities for youth and adults to engage and learn about complex issues relating to how food is produced, harvested, stored, distributed, and sold.



---

Beginning and expanding farmer agendas provide support to increase the number of producers on Pine Ridge.

---

Technical assistance advisors and students get out of the classroom and onto farms and ranches, into processing facilities, and educational institutions to learn about pathways in agriculture and food fields, education, and careers.



---

Programs develop leadership skills by helping producers navigate the mechanics of food system decisions.

---

Barriers to entering into a farming profession are reduced with a business incubator-like program offering access to learning, infrastructure access, and peer-to-peer collaboration via a marketing cooperative for small-medium sized farmers ready to contribute to a better food system.

The reservation is not only designated as an underserved population, but it is also truly an underserved rural area of the state.



## The Main Elements of the Agricultural Model

The significance of this project is furthering momentum to revitalize Pine Ridge's economy. Sustainability and profitability are the keys to ensuring that each piece of the program provides financial gain for participants. All aspects of each component will be assessed as a business model to validate infrastructure, barriers, inputs, operations, markets, and financials.

The main elements of the agricultural model for enhancing the economy of Pine Ridge involve:



**Production:** programs to recruit, train, and coordinate a contingency of fruit and vegetable growers and livestock producers who are seeking profitability by working together to aggregate production and processing, as well as marketing and distribution through a branded value-added food system.



**Processing:** a processing facility and skilled workers to process, value add, and package high-value fruits, vegetables, and meats that adhere to food safety requirements, brand specifications, and exceed consumer expectations.



**Aggregation:** a service and marketing cooperative to deliver technical and financial support to producer members for agricultural production and demand-based coordination, along with product branding, market research, sales, and distribution of food products to customers (local, regional, domestic, and international).



**PRAE Project Administration and Execution:** creating and implementing this concept will demand the involvement of many local, state, regional, national, and federal players for an extended time. Provisions for a coordinator to monitor and direct overall activity, as well as support for participating agency staff tasked with developing and executing comprehensive program organization, details, activities, and implementing operations will be necessary. It is anticipated that the main coordinator will be an individual tribal member with the capacity to champion the concept across all elements and among all participants. A steering committee of managers from organizations with a vested interest in developing essential communications, providing oversight, conducting meetings, and creating and executing implementation strategies will help achieve the goals.





## Background

The first humans to inhabit South Dakota acquired food, fuel, and fiber by hunting animals, gathering fruits, and pulling handfuls of seeds from wild plants. Hunting, food gathering, and settlement patterns were adapted as climate and vegetation changed over time. Settlers began to plant crops and depend on more intentional harvest practices as camps were established triggering repeat food collection from the same land base. Farming started using local wild plants that were eventually domesticated by altering their natural genetic growth patterns over several thousand years through selective collection and seed accumulation. Subsequent lifestyle changes reduced dependence on locally sourced food, fuel, and fiber altering land use and agricultural production practices.



Today only 55 percent of the 363 farms located on Pine Ridge are operated by Native Americans. Of those 200 farming enterprises, at least 64.5 percent meet USDA's definition of *small farm* (gross sales less than \$250,000) with farm value sales of less than \$99,999. Furthermore, 39 percent report sales of less than \$50,000.\*

### Hardships in Agriculture Production

Only about 84,000 acres of the nearly 3 million acres within the borders of the reservation are suitable for agriculture. The topography includes badlands, pine trees, hills, and a mix of dry land prairie grasses. Land use and production options are narrow for Native American operators encompassing mostly corn (13 farms) and wheat (38 farms); the landscape is void of traditional corn, vegetable, orchard, or berry farms. Livestock is much the same, comprised of 166 beef and dairy cattle, 13 hog and 2 buffalo Native American farms.\* These commodity crops are either fed to livestock or sold to area elevators and livestock is generally sold at the auction barn.

Lack of diversity in agriculture production stifles the potential for existing farmers and ranchers to

enhance their operations. There is little they can do with current commodity and livestock prices to expand or increase profitability. Traditional commodities, such as corn, wheat, and beef are not particularly conducive to value-added processing due to market competition with high volume processors. In addition, the producer's time is typically consumed with managing their operation—where their expertise lies in growing crops or livestock. This leaves most growers with little time or interest to work through complex stages of developing a value-added product. Thus, in spite of the vast amount of land, agriculture production is not a prevalent economic driver like it is for South Dakota as a whole—the State touts *Agriculture as our #1 Industry*.



## Pine Ridge Statistics

South Dakota is classified by USDA Economic Research Service as *frontier and remote* in both land area and population. Nearly 25 percent of the 754,343 people reside in locales classified as Level 4—most isolated group. Pine Ridge represents the extreme of this category with little or no access to “low order” goods and services, such as grocery stores, gas stations, and basic health care services.\*\* It consists of a countryside made up of rugged terrain, few communities, few roads, and few operable vehicles—all of this exaggerates inaccessibility challenges for the reservation residents.

Lack of local assets and strengths limit industry and, in turn, employment opportunities. The few available jobs in towns scattered across the

vast open native grass plains are not sufficient for the 28,000 to 40,000-population base. Income and jobless rates reflect the health of an area’s economy. Since the majority of income is generated through employment, a weak job market can account for low incomes and high poverty. The absence of businesses offering employment creates a domino effect that ends with limited human capital from which to draw from, lack of disposable income of residents leaving reservation businesses with a limited customer base, as well as elevated unemployment rate and poverty levels. Moreover, in an environment deficient of enterprise, children miss out on workforce mentoring. As adults, they can turn into “unemployed” or “out-migration” statistics as they leave the reservation.

### 2010 Frontier and Remote—Level 4\*\*



Pine Ridge is an extremely depressed area where most statistical ratings are less than half of those representing the state as a whole.

**\$26,383**

The typical household income  
in Oglala Lakota County

**53%**

Oglala Lakota  
County Poverty Rate

**60%**

Pine Ridge  
Unemployment Rate

**\$50,338**

State median income

**15.6%**

National  
Poverty Rate\*\*\*

**5%**

National  
Unemployment Rate\*\*\*\*

\*2012 Census of Ag-American Indian Reservations—USDA

\*\*<http://www.ers.usda.gov/data-products/frontier-and-remote-area-codes.aspx>

\*\*\*<http://247wallst.com/special-report/2016/01/05/poorest-county-in-each-state/2/>

\*\*\*\*<http://dlr.sd.gov/unemploymentrate.aspx>



## Project Needs

Low income, intensified health issues and cultural challenges are natural consequences to Pine Ridge's extreme rural nature. Pine Ridge could gain the most from an agricultural food economy yet building a comprehensive food system development plan is complicated due to:

- the extreme rural nature,
- mix of tribal and non-tribal governmental arms, and
- a lack of resource availability and awareness.



## Understanding and Respecting Cultural Life Styles and Land Stewardship

Some of the essential components to successfully build reservation economies are:

- Engaging Native American producers (farmer, rancher, grower, and traditional harvester) to produce and then support processing and marketing can create synergistic rewards.
- Diversified agriculture results in a variety of products grown and harvested. Products can be used by the family and/or sold in local, regional, domestic, and international markets, based on niche branding highlighting attributes, such as Native American, organic, indigenous, or grass-fed, that foster producer-consumer relationships.
- Continuing progression of a sustainable local food system to move the reservation toward food sovereignty can generate healthy food access to counter diabetes, heart disease, and obesity, among other health concerns.





At the heart of our task is education to help bring a sustainable community into being, to give our children and all members of our community the values, tools, understanding, leadership skills, and experiences we need to seek and regain balance with the natural world.

## PRAE Response

A combination of local individuals and businesses, nonprofits, tribal, local, state, and federal agencies, and others are effectively delivering outreach, technical assistance, training, and funding necessary to foster the initial phases of change. Agriculture production is occurring at various levels through the development of technical assistance and individual, community, and youth gardens. Although small in number, planting the seed to entice individuals can lead to cultivation of the next generation of farmers likely to become involved in PRAE. Operating entities, such as a small buffalo production/value-added cooperative, can lend planning and operations insight in the agriculture and food field.

Current representation of activity engaging individuals growing local foods, include:

- **Thunder Valley Community Development Corporation (Thunder Valley CDC)** has initiated their local foods effort by creating a community garden with the aid of community volunteers, summer youth, and the Office of Family Assistance and Temporary Assistance for Needy Families (TANF) workers, as well as staff members. The produce is given to those who work in the garden, elders, and to those who ask for it.
- **South Dakota State University & SDSU Extension** provides training programs and production expertise to groups and individuals. Specialized aid is provided in accordance with funding sources, such as the National Institute of Food and Agriculture grant that provides individual producer support over a three-year period.
- **Oglala Lakota College Agriculture Extension Department** offers technical assistance to gardeners in youth and school activities, community activities, seed distribution, and cultural activities.
- **Lakota Buffalo Caretakers Cooperative** is 100 percent owned by Native American family buffalo caretakers who sell packaged grass-fed buffalo meat raised on Pine Ridge.

Note: Reference Attachments 3-6 for additional information regarding these activities.



# Areas to Address

## Participants

Producer participants will be represented in a number of different forms and identified according to their production. Additional segmentation will likely be used to further refine prospective growers, such as a beginning farmer, a small-medium sized farmer, a gardener, or an organic grower. Emphasis will be determined based on market demand and processing capacity. Regular outreach and trainings will allow technical assistance providers to be in contact with individuals who may be interested in starting or expanding a garden, farming operation, or other related agricultural activities. Resource provisions will be available on a continuing basis to PRAE producer members to help support a successful farming business.

## Potential producer and production profiles:



**Grower**  
produce, herbs,  
horticulture, seed



**Traditional Harvester**  
indigenous plants (plum,  
herbs, chokecherry,  
buffaloberry)



**Crop Farmer**  
corn, wheat,  
sunflowers



**Livestock  
Producer/Rancher**  
beef cattle, hogs,  
buffalo, chickens



**Tribally-owned Farm**  
produce, crop,  
livestock, buffalo



"Strategic thinking or development founded on societal goals, rather than on quick fixes, will result in institutions and foundations for sustained development and enhanced community welfare."

—Stephen Cornell and Joseph P. Kalt



## Training

Among barriers to food production on Pine Ridge is a lack of experience, whether it be formal training or hands-on experience. Partnering entities already have programs and resources that can or are being used, such as Farm Service Agency financial literacy, and new/beginning farmer programs, and SDSU Extension technical assistance.

A production curriculum will be structured around:

- production practices,
- conservation and stewardship,
- harvest and post-harvest handling, food safety, and
- business planning, risk management, and finances.



Access to training will vary due to participating producer remote locations and a lack of transportation, so travel expenses (for trainer travel to producers or producers traveling and staying at a community) need to be accounted for. It may also be necessary to bring in experts from other areas to give specialized training on subjects, such as cultural hunting and gathering. Training considerations to ensure access to technical assistance entail the following:

- Provide full scholarships (registration, fees, travel, per-diem) for individuals committed to learning production techniques through formal education, internships, short courses, farm visits, and other venues.
- Compensate (\$20 per hour minimum, expenses) current on and off reservation producers for mentoring others.
- Fund Oglala Lakota College staff, with a master's degree or higher level, horticulture production specialists, to provide commercial production and mentoring.
- Support for resource entities to create, adapt, and deliver technical assistance to foster success of producers.

## Access to Capital

Access to capital and credit can be a significant challenge for small-medium sized farming operations, especially for limited resource and disadvantaged farmers confronted with significant financial investment of up-front equipment and operations costs. Of the 200 existing farms on Pine Ridge, 55 percent ranked in categories of less than \$50,000 for Farms By Value of Sales.\* Furthermore, 48 percent of Pine Ridge households have estimated income of \$0-\$30,000, compared to 29 percent across the United States.\*\* This indicates both existing farms and individuals interested in starting up a production operation may face hurdles in qualifying for standard loans from conventional lenders or accessing loan programs because of previous repayment records or lack of income.

## Median per capita income in Pine Ridge in 2013

Pine Ridge	<div></div>	\$9,193
State	<div></div>	\$10,230

\*Census of Agriculture—American Indian Reservations 2012  
\*\*<http://www.bestplaces.net>

## Creativity and targeted programs can help individuals and families identify and tap into funding programs.

- **Lakota Funds**, a nonprofit organization and a CDFI, has placed \$7 million in loans and developed programs that are now capable of loaning up to \$300,000 to new and growing businesses on Pine Ridge where “85 percent of our clients never had a checking or savings account; 75 percent never had a loan; and 95 percent had no business experience.” They also implemented the *Su Owojupi* (They’re Planting) Project to promote local food production by making loans and grants to tribal members wanting to plant a garden. For example, John Yellow Hawk received a \$1,000 loan and a \$2,000 grant to plant his garden, consisting mostly of potatoes. His family—even the youngest of children—help with weeding. He plans to sell the potatoes at a farmers market, but will keep enough for his family to eat, which amounts to \$100 per month saved. In addition to the extra food and income, the garden has therapeutic value, helping take his mind off things and gives him time to grieve for the recent loss of his wife of 29 years. Reference Attachment 7 for information about the Lakota Funds.
  - **USDA Rural Development (RD)** has numerous programs and a current loan portfolio of more than \$210 billion to help carry out its mission to *bring enhanced economic opportunity to the Nation’s rural communities*. Emphasis on beginning farmers, small-medium sized farms, and underserved populations can augment many pieces of this project since it is in an underserved area and intends to introduce individuals to agriculture production. The department provides loans, grants, and loan guarantees to support essential services (economic development, infrastructure, and technical assistance) to help agricultural producers and cooperatives get started and improve the effectiveness of their operations. Refer to Attachment 8 for additional information about RD programs and services.
  - **USDA Natural Resources Conservation Service (NRCS)** offers a host of programs to assist producers in planning, implementing, and financing conservation practices supporting the environmental sustainability of their operations. The Conservation Practice Standard—High Tunnel System addresses enclosed structures used to cover and protect crops from sun, wind, excessive rainfall, or cold to extend the growing season in an environmentally safe manner. The Organic Initiative provides producers financial assistance to implement a broad set of conservation practices addressing resource concerns. Refer to Attachment 9 for additional information about NRCS programs and services.
  - **USDA Farm Service Agency (FSA)** plays a vital role in the economic survival of South Dakota’s rural communities by facilitating farmer and rancher access to financial assistance from USDA programs. Expanded farm ownership microloans, announced January 2016, create a new financing avenue for farmers to buy and improve property. The microloans are targeted to help beginning and underserved farmers, U.S. veterans looking for a career in farming, and those who have small-medium sized farming operations. USDA’s December 2015 extension of the availability of farm loans for Indian tribes and members to purchase tribal farmland that has multiple owners can help improve access to capital for tribal members. Refer to Attachment 10 for additional information about FSA programs and services.
- “85 percent of our clients never had a checking or savings account; 75 percent never had a loan; and 95 percent had no business experience.”  
—Lakota Funds



## High Tunnel

Growing traditional crops can be difficult due to a semi-arid climate and extreme weather—from heat to cold to wind to hail, which can significantly reduce yields or wipe out a whole crop. The rural nature of Pine Ridge also means persistent pests—from insects to deer to other predators. PRAE will consider utilizing high tunnels as an option to mitigate these problems for the production of fruits, vegetables, and herbs. According to the University of Minnesota, the primary advantage of high tunnels is to extend the growing season by starting production early and ending production after killing frost occurs. [High Tunnel Marketing and Economics, 2012, Karl Foord—University of Minnesota Regents]

Other factors lending to increased profitability include:

- a longer shelf life of produce,
- minimizing pesticide use, and
- offering a continuous flow of produce beyond what field production can provide.

While installation of a high tunnel can significantly increase a producer's operating expenses, the benefits tend to offset them over time and result in greater profitability and support market access by reducing production seasonality and product inconsistencies. Reference Attachment 1 for profitability scenarios.



12,000  
square feet

Will generate an estimated  
> **\$43,680**  
PRAE Family Farm  
Net Annual Income

Resource providers have the expertise to jointly develop feasibility assessment and business planning tailored to PRAE project entities. SDSU Extension is delivering technical assistance training to producers and is preparing a strategy to assist in placing high tunnels on Pine Ridge. The Value-Added Agriculture Development Center works directly with clients to write feasibility assessments and business plans to create viable business entities. Multiple USDA programs can be used to help producers build their agriculture production business. For example, NRCS's EQIP program can be factored into financial projections for technical and financial assistance in purchasing a high tunnel and FSA can provide microloans to finance high tunnels and operating costs.





### Project Needs

Since the current 200 Pine Ridge farmers and ranchers independently care for their operation and sell commodities into the marketplace, there is limited potential for change. By broadening agriculture production operations to include a variety of food production, such as fruits, vegetables, herbs, meats, poultry, and traditional harvest of indigenous plants, farmers and ranchers can increase income, in addition to creating more opportunities for profitability through investment in value-added processing. Food production is generally more labor intensive than growing commodity, which creates the need for skilled labor. This is augmented with value-added processing, marketing, and distribution components. Value-added can be achieved by:

- washing,
- destemming,
- bagging fresh produce (such as tomatoes)
- further processing (making spaghetti sauce), or
- niche marketing (promoting the word *organic*).

The work put into “transforming” a raw product is rewarded by incremental price increases that the producer can share in. In Pine Ridge, value-added can also include indigenous and traditional produce and foods. The market expands dramatically with value-added products because the shelf life is generally extended, which allows the distribution to reach more distant customers, even worldwide markets.

### Specialty Branding

Despite what seems like impossible conditions, the beginning of a shift is evolving within various sectors of the reservation—all the way from the Tribal Council to individuals (elders and youth). Residents are reviving traditional culture to promote a life of self-respect and self-sufficiency, including creating a local food system to foster food sovereignty. While it will take time to create an in-depth, effective strategy and to deliver training and implementation of the value-added food model; gardens are being planted and people are engaged in training.





Building a Native American brand can be lucrative because today's consumers are captivated by food source and the story of where food comes from. Brands, such as *Know Your Farmer*, *Know Your Food*, and key words, such as *sustainable production*, *organic*, and *healthy*, are all specialty categories that Pine Ridge foods could tout and in turn demand niche pricing.



## PRAE Response

Development of the Pine Ridge local food system is bringing reservation residents together and elevating discussion about the various aspects of the structure, whether it is having access to fresh foods, improving health, or growing the food. Producers will be the core of the PRAE concept since they provide the feedstock foods via rural, community, and school gardens. Several programs are in place to move individuals into planting and harvesting. Many will likely be satisfied with simply providing food for their family, a farmers market, or to give away; while others will be interested in expanding to produce more volume and variety.

Another group of prospective growers are those interested in building high tunnels or raising livestock. This wide-ranging pool of producers, with shared goals and values, can come together under a cooperative structure. They can hire staff to provide services, market their products

(retail and wholesale), develop new products, and handle distribution. The cooperative entity acts as a franchise for producer members handling production, aggregation, value-added processing, and as an agent for customers (possibly members) for marketing, sales, and distribution; allowing producers to focus their attention on their expertise—growing food.

Representation of current activity engaging individuals in the Pine Ridge local food system:

- **Oglala Food Sovereignty Coalition** is led by Thunder Valley CDC to shape a reservation-wide effort creating a sustainable local food system. Goals include sustainable food education, implementation of traditional land stewardship, healthy food classrooms, ecotourism, and food production.
- **The Value-Added Agriculture Development Center** is developing a business plan for a cooperative entity to provide services and marketing to beginning and expanding buffalo producers. Increased buffalo production will help meet value-added processing demand for companies like Native American Natural Foods (Tanka Bar). Reference Attachment 11 for additional information.
- **Arrowhead Foods** in Whiteclay, NE (adjacent to Pine Ridge) is the town's first Native American owned business. The Pilcher family purchased a 3,000-square-foot building in December 2015 with the help of an alliance of two tribal organizations, including the Lakota Funds and a Gordon, NE bank. In addition to groceries, the store cooks food and caters, which means this could be a tier one market for PRAE.



The wide-ranging pool of producers, with shared goals and values, can come together under PRAE.



# Areas to Address

## System Structure

While aggregation and marketing are the main tasks of the proposed cooperative, the other two features of PRAE are intertwined in the overall scope. As outlined in this document, a potential solution has been identified for each facet. However, more discovery is necessary to support the expected capacity of each individual component and then how each of them interact within the scope of the project. This pre-feasibility assessment will require time and resources from each provider and a coordinator will need to oversee activity, compile information, and make recommendations based on a comprehensive perspective of the overall project.

### AGGREGATION

individual producers leverage capital and labor to grow food for the cooperative

### TECHNICAL ASSISTANCE

business planning, financial, and production training

### FOOD PROCESSING CENTER

commercial kitchen where food is processed to add value

### MARKETING

create product branding, generate customers, and distribution (raw and processed)

## Youth

The next generation is becoming more active in making changes to improve the health, culture, and environment of their Nation. Thunder Valley CDC is spearheaded by 20- to 30-year-olds motivated to ensure families and children have the opportunity to succeed. An example is Native American Natural Food's (NANF) launch of the value-added prairie-fed buffalo and cranberry Tanka Bar (based on traditional *wasna* and *pemmican*) in 2006. This created jobs building skillsets and an opportunity for employees to advance and earn more income.

There are many different roles youth can pursue from moving buffalo in rotational grazing to developing high tunnel product plans. PRAE will explore means to foster youth involvement by:

- investigating roles and opportunities that are attractive to youth,
- determining support services necessary to engage them,
- developing necessary programs and establishing infrastructure, including elder mentors, and
- crafting creative ways to help fund youth and program expenses, such as internships and cost-share training.

\*<http://www.backpacksforpineridge.com>





## Traditional Foods

Finding ways to introduce foods historically used in Native American diets and ceremonies into today's cuisine offers a significant opportunity to inject hunting and gathering traditions into PRAE. More Pine Ridge residents are partaking in traditional harvest for wild herbal teas, onions, raspberries, strawberries, grapes, sweetgrass, sage, and seeds. The story of these plants, meats, and food can be attractive to consumers seeking natural or organic options. In fact, it may be beneficial to have them as some of the first products released

to help establish the Native American brand. Exploring these opportunities will be part of the marketing study to determine the quantity needed and availability. PRAE partners, producers, and traditional harvesters can contribute to assess potential, such as:

- exploring the feasibility of product availability and accessibility, and
- conducting a marketing study on consumer desires.

Gardeners can be visionaries, fostering healing processes and the return to Native values.

—Gardens for Humanity





## Buffalo Entity

Much of the narrative in this proposal has intentionally referenced produce production because it is an easier tract that can initially attract more participants. However, livestock opportunities are included in the PRAE plan as well. As stated previously, a business plan is underway for a buffalo production resource coop comparable to the PRAE concept meaning there may be synergistic relations to consider as both ventures move forward. The NANF created a new food item, branded it, and successfully placed it into the markets across the United States. NANF is continually exploring new recipes and products, so local growers could supply some of the ingredients for their products. Providing resources to assist the buffalo company could provide a blueprint for PRAE and help promote its cooperative concept. Potential assistance:

- technical assistance to conclude business development, and
- funding to launch the cooperative.



## Business Planning

It is essential for PRAE to develop a feasibility study to validate the concept and then a business plan to clarify producer and operational services, infrastructure and efficiencies, and market access and operations, which will result in a profitable bottom line. The process requires input from PRAE partners, as well as expertise from industry and professional services. The documents will need to address typical areas of the company, such as the technology, management, product, market, and financial aspects. This task requires time and funding resources and there will need to be leadership in place to manage the overall project, along with the following other knowledgeable contributors:



Consultant—market assessment, commercial kitchen, economic viability, and document drafting,



Accountant—financial projections, and



Legal counsel—tribal details, cooperative structure, and equity prospectus.



### Project Needs

Volatile markets can make it difficult to earn a consistent income from commodity crops, but Pine Ridge producers are in a position to increase profit through value-added food processing. A wide variety of cultivated and traditional harvested agricultural products can be generated and sold into markets where consumers are willing to pay more for unique and sustainably grown products.

“Value-added processing can help producers capitalize even more on a consumer’s desire to choose foods based on multiple food factors including taste, ingredients, source, nutritional composition, asking who is making their foods, and understanding the impact on the environment and animal welfare.”

—Phil Lambert, Supermarket Guru, 2013





Barriers can hamper an individual's ability to enter the processing arena. Federal and state regulations prohibit commercial food processing in home kitchens, and meeting equipment health code requirements can put costs out of reach. Another factor is that the individual quantity of the product may be too small to fill the capacity of even small scale units. PRAE removes these obstacles through incorporation of a cooperative that will aggregate member product and collaborate with a processor to make high-value merchandise.

NANF annually uses over 300,000 pounds of buffalo to make their Tanka Bar and market demand is escalating. While they were the main creator of the meat and fruit bar category, competition is increasing, which makes research and development to improve existing products and develop new ones a daily task. NANF is devoted to improving conditions on Pine Ridge—they are Oglala Lakota's with a deep commitment to helping the People, the Buffalo, and Mother Earth. PRAE can help NANF meet the market demand by providing the resources they need, including access to local harvest, manufacturing, and research and development. Having access to these services locally, NANF can help grow the economy of Pine Ridge.

PRAE removes the obstacles and collaborates with processors to make high-value merchandise.





## PRAE Response

High end value-added processing capacity is essential to the PRAE concept. It is too early in the planning process to understand the size or scope required to handle PRAE production and market needs. It can be assumed that initial volumes will be somewhat small with minimal processing (cleaning and bagging fresh produce); but increase with the addition of producers and market growth. Coordination will be essential to align kitchen set-up with the cooperative's production, types of products, and market volume. Representation of current activity engaging individuals in value-added food processing, include:

- **Oglala Lakota College's (OLC) Agriculture Extension Department** has identified value-added processing as an unmet need in their local foods work strategy. The ability to process and package produce for consumption when fresh produce is not available is a means to augment year around consumption of healthy foods. A plan to include a kitchen in the proposed Ag Expo Center project is already on the table.
- **Thunder Valley CDC** included construction of a small processing facility in the layout of their community food systems design with the intent of supporting traditional harvesting by giving families access to wild game processing space.
- **Native Americans Nonprofit Organization** is operating a food-truck type food processing kitchen on wheels, furnishing families an opportunity to process small quantities of produce.
- **Value-Added Agriculture Development Center (VAADC)** is familiar in design, operations, and pricing of small scale produce processing facilities and has materials that can be replicated and adapted to facilitate PRAE needs. VAADC also has extensive experience in managing projects, drafting business development documents, project funding—seeking resources, making application and administering funds, and securing and overseeing industry consultants.





## Areas to Address

### Processing Center Structure

Discovery is necessary to determine the size, scope, and required operations of a facility. This will be dependent on the type and volume of produce to be handled and value-added products to be made. This pre-feasibility study will require an OLC coordinator to oversee activity, compile information, and make recommendations based on the overall project. They will need to assess the following:

- **Cooperative and customer processing needs**—produce production, volume assessment, value-added products,
- **Kitchen evaluation**—infrastructure and basic equipment options, cooling needs, preliminary budgeting, and
- **Technical assistance**—business planning, financial, producer food safety, and quality training and assistance.

### Business Planning

It is essential for PRAE to develop a feasibility study to validate the concept, and then a business plan to refine processing and technical assistance services, infrastructure and efficiency considerations, and exploring of funding sources. The process requires collaboration between leadership of OLC and PRAE partners, as well as industry and professional service expertise. The documents need to address standard topics including the company, technology, management, product, market, and financial projections. Again this task requires time and funding resources—there needs to be OLC leadership in place to manage the overall project and PRAE resource contributions, along with other potential contributors, including:

- **Consultants**—market assessment study; technology engineering, economic viability, market plan, and document drafting,
- **Accountants**—financial projections and assumptions, and
- **Legal counsel**—tribal details, funding, and contracts.



### Facility Construction

Based on positive business planning that supports development of a value-added processing kitchen, a facility will need to be built.

- Explore funding options for construction, equipment-installation, furniture-fixtures, inventory, startup working capital, and other required needs.

### Workforce Development

A large portion of Pine Ridge's population is unemployed due to a lack of jobs. A value-added processing center can enhance the economy in several ways. The obvious is job creation by processing facility operations. Additional jobs opportunities include:

- maintenance,
- label design,
- nutritional analysis,
- recipe research and development, and
- teaching staff at the college to train students.



Creation of a workforce development platform can offer educational opportunities and programs to enhance skill levels and allow participants to secure employment in high-paying, in-demand jobs. Further collaboration with Oglala Lakota College can potentially develop training that is tailored to meet specific business and industry requirements.

- Explore the possibility of creating an entity and platform to provide employee training opportunities.
- Design workshops, customized training, manufacturing, technology, maintenance training, business management and accounting instruction, and value-added food system program, and
- Consider agriculture production, processing, and marketing internships and training offering youth school credit and practical experience to counter the 70 percent school dropout rate and entice them into the labor force.

A landscape photograph showing a grassy hill in the foreground and middle ground. The grass is a mix of green and brown, suggesting a dry or late summer season. In the upper right, a bald eagle is in flight, its wings spread wide against a clear blue sky. The eagle's head is turned back, looking towards the left. The overall scene is peaceful and expansive.

"A great vision is needed and the man who has it must follow it as the eagle seeks the deepest blue of the sky."

— Crazy Horse, Oglala Lakota





# ATTACHMENTS





# Economic Impact: High Tunnel Production

PRAE Annual Income Scenario: 12,000 Square Feet High Tunnel Vegetable Farm

## Iowa Multiple Product Vegetable Farm Budget Example

**Assumptions:** ▷ High Tunnel Size: 2,160 Square Feet (30'x72') ▷ Approximate Original High Tunnel Cost: \$7,000  
▷ Utilization: 84 percent

Receipts	Yield	Square feet	\$/Lb	Total \$	Yield/SqFt	Gross \$/Square feet
Cucumbers	567.0	454	2.00	1,134.00	1.25	\$2.50
Eggplant	204.1	45	2.00	408.24	4.50	\$9.00
Greens	166.9	363	7.00	1,168.47	0.46	\$3.22
Herbs	14.5	9	16.00	232.24	1.60	\$25.60
Lettuce	208.7	181	7.00	1,460.59	1.15	\$8.05
Peppers–Bell	290.3	181	2.00	580.61	1.60	\$3.20
Tomatoes–Slicers	1,315.4	454	2.50	3,288.60	2.90	\$7.25
Tomatoes–Grape	342.9	127	4.00	1,371.69	2.70	\$10.80
<b>Total Annual Receipts</b>		<b>1,814</b>		<b>\$9,644.44</b>		<b>\$5.32</b>

Operating Expenses	Annual	Labor Costs (Mar–Sept)	Hours	\$/Unit	Total \$
Seeds/Transplants	135.00	Bed Preparation	17.00	12.00	204.00
Fertilizers	108.00	General Maintenance	23.00	12.00	276.00
Miscellaneous Supplies	125.00	Planting	10.50	12.00	126.00
Water	86.40	Pest Management	0.00	12.00	0.00
Water Test	17.00	Harvest	48.80	12.00	585.60
Irrigation Supplies	122.00				
<b>Total Annual Expenses</b>	<b>\$593.40</b>	<b>Total Hours</b>	<b>99.30</b>		<b>\$1,191.60</b>

Ownership Costs	Annual	Annual Summary	Total \$
Depreciation: Tunnel	\$875.00	Annual Operating Expense	\$2,773.40
Depreciation: Plastic Cover	113.40	Annual Expense/Square feet	\$1.28
<b>Total Ownership</b>	<b>\$988.40</b>	<b>Annual Returns Over Total Costs</b>	
		Annual Net Income	\$6,871.04
		Annual Return/Square feet	\$3.18

Iowa State University Extension and Outreach (ISUEO) data tables were used in creating estimated labor cost and profitability scenarios for a PRAE family farm with 12,000 square feet of high tunnel vegetable production.

The calculated ISUEO data-based \$43,680 profit, supports further evaluation of the concept. PRAE-specific parameters will be generated, analyzed and incorporated into prospective financial forecasts during the feasibility and business planning phases of the project.

### PRAE Producer Labor Cost, *Estimated*

- ▷ **ISUEO Annual Labor Cost:** 2,160 Square Feet High Tunnel Production  
Annual Labor Hours/Square Feet:  
 $99.30 \text{ Hours} / 2,160 \text{ Square Feet/High Tunnel} = 0.046 \text{ Hours/Square Feet}$
- ▷ **PRAE Farm Family Annual Hired Labor:** 12,000 Square Feet High Tunnel Production  
PRAE Farm Production–Square Feet      12,000  
Annual Labor Hours/Square Feet       $\times 0.046$   
Annual Labor Hours, *Estimate*      552
- ▷ **PRAE Farm Family Annual Labor Cost:** 12,000 Square Feet High Tunnel Production  
Annual Labor Hours      552  
PRAE Labor Hourly Cost       $\times \$12$   
Annual Labor Cost, *Estimate*      \$6,624 PRAE Family Farm Labor Cost





## PRAE Family Farm Annual Economic Impact: Production Employment

Owner Net Income	\$43,680
Part Time Labor Wage	+ \$ 6,624
1 Family Farm Wage	\$ 50,304
150 Farms	<b>\$7,545,600</b> PRAE 150 Farm Wage Impact

## PRAE Producer Annual Income, *Estimated*

### ▷ ISUEO Annual Income: 2,160 Square Feet High Tunnel Production, Without High Tunnel Cost

Annual Receipts	\$9,644.44
Annual Operating Expense	- \$1,785.00 High Tunnel Ownership Cost Not Included
Annual Net Income	\$7,859.44
Annual Return/Square Feet	\$3.64

### ▷ PRAE Farm Family Annual Income: 12,000 Square Feet High Tunnel Production

PRAE Farm Production, Square Feet	12,000
Annual Return/Square Feet	x \$3.64
Annual Net Income, <i>Estimate</i>	<b>\$43,680</b> PRAE Family Farm Income
Hourly Pay Equivalent	\$43,680 Net Income/2,080 Hours/Year = \$21/Hour

(Vegetable Production Budgets for a High Tunnel, May 2012, Iowa State University Extension and Outreach)

## Economic Impact: Job Creation

### PRAE Economic Value Scenario

Calculations built around data from Minnesota and Iowa studies show various levels of job creation scenarios for a PRAE family farm with 12,000 square feet of high tunnel production. There is some variation due to differences in individual project parameters, however, the estimates offer preliminary analysis of employment potential.

### ▷ PRAE Direct Job Creation: 12,000 Square Feet High Tunnel Producer Operation

Owner/Family:	1 Full Time Equivalent (FTE)
Part Time Hired Labor:	552 Hired Labor Hours/2,080 Annual Hours = 26.5 Hours or ¼ FTE, <i>Approximately</i>
PRAE Project:	150 Producer Farms + (150 Producer Farms x ¼ FTE) = <b>187 Employee Equivalents</b>

## State of Minnesota Farm-Level Economic Values of Fruit and Vegetable Production

	Direct	Indirect	Induced	Total	Multiplier
Output	\$106,802,903	\$31,773,506	\$33,837,884	\$172,414,295	1.61
Value-Added	\$51,627,900	\$17,612,270	\$19,316,914	\$88,557,088	1.72
Labor Income	\$27,994,426	\$10,490,675	\$10,603,391	\$49,088,492	1.75
Jobs	628.7	264.5	273.5	1,166.7	1.86

### ▷ PRAE Indirect and Induced Job Creation: 12,000 Square Feet High Tunnel Producer Operation (Using Minnesota Farm Level Economic Values)

Indirect Jobs	264.5 Indirect Jobs/628.7 Direct Jobs = .42 .42 x 187 Jobs = <b>78 Jobs</b>
Induced Jobs	273.5 Direct Jobs/628.7 Direct Jobs = .435 .435 x 187 Jobs = <b>81 Jobs</b>

### ▷ PRAE Family Farm Economic Impact-Job Creation: 12,000 Square Feet High Tunnel Producer Operation

Direct Jobs (Owner/Part Time Labor)	187
Indirect Jobs	78
Induced Jobs	+ 81
<b>Total Jobs</b>	<b>346</b> PRAE 150 Family Farm Jobs

*Selected Measures of Economic Value of Increased Fruit and Vegetable Production and Consumption in the Upper Midwest, March 2010, Dave Swenson, Iowa State University*

[www.leopold.iastate.edu/pubs-and-papers/2010-03-selected-measures-economic-values-increased-fruit-and-vegetable-production-a](http://www.leopold.iastate.edu/pubs-and-papers/2010-03-selected-measures-economic-values-increased-fruit-and-vegetable-production-a)

# Local Impact Output Multipliers

By Supply Chain Segment For Local Foods

Supply Chain Segment	Category	Overall Output	Geographic Area	Source
<b>Production</b> (Range 1.55 to 2.6)	Fruits and Vegetables	1.55	Statewide (SC)	Carpi et al, 2007
	Fruits and Vegetables	1.57	Statewide (MI)	Swenson, 2011
	Fruits and Vegetables	1.58	Statewide (IA)	Swenson, 2011
	Fruits and Vegetables	1.59	Statewide (WI)	Swenson, 2011
	Fruits and Vegetables	1.61	Statewide (MN)	Swenson, 2011
	Fruits and Vegetables	1.62	Statewide (IN)	Swenson, 2011
	Fruits and Vegetables	1.65	Statewide (IL)	Swenson, 2011
	Vegetable and Melon Farming	1.94	Urban/Periurban/Rural (NY)	Hawes et al, 2011
	Fruit Farming	2.03	Urban/Periurban/Rural (NY)	Hawes et al, 2011
	Farmers Grow Local	1.70	Statewide (NC)	Curtis et al, 2010
	Dairy	1.71	Statewide (VT)	O'Hara, 2012
	Dairy	2.10	Statewide (MN)	O'Hara, 2012
	Farms and Ranches	1.75 to 1.93	Rural/Periurban (WA)	Sonntag, 2008
	Small Farms in Small Farm Area	2.20 to 2.60	Rural (WI)	Swain, 1999
	<b>Segment Average (minus hi/lo)</b>	<b>1.84</b>		
<b>Processing</b> (Range 1.37 to 1.9)	Manufacturers/Processors	1.37 to 1.7	Urban/Periurban (WA)	Sonntag, 2008
	Cookie, Crackers, Pasta Mfg.	1.84	Urban/Periurban/Rural (NY)	Hawes et al, 2011
	Bread and Bakery Mfg.	1.90	Urban/Periurban/Rural (NY)	Hawes et al, 2011
	<b>Segment Average (minus hi/lo)</b>	<b>1.77</b>		
<b>Distribution</b> (Range 1.16 to 4)	Distributors	1.16	Urban (WA)	Sonntag, 2008
	Food Hubs	2.60	Rural (SW, WI)	Lit review case studies
	Food Hubs	4.00	Urban (Toronto, ON)	Lit review case studies
	<b>Segment Average (minus hi/lo)</b>	<b>2.60</b>		
<b>Retail/Consumption</b> (Range 1.3 to 2.8)	Local Food Sales to Consumers	1.30	Rural Towns/Urban Areas	Meter, 2011
	Farmers Markets	1.58	Statewide (IA)	Otto et al, 2005
	Farmers Markets	1.61 to 1.65	National Average	Lit review case studies
	Farmers Markets	1.78	Statewide (OK)	O'Hara, 2011 (op cit)
	Farmers Markets	2.66	Statewide (GA)	Rhoads et al, 2009
	Farmers Markets	2.80	Statewide (NC)	Curtis et al, 2010
	Market Management	2.27	Urban (WA, OH, MO, NY)	Econsult, 2007
	Grocers	1.48 to 1.72	Urban/Periurban (WA)	Sonntag, 2008
	Local Restaurant	1.70	Statewide (NC)	Curtis et al, 2010
	Local Restaurant	2.20	National Average	Rhoads et al, 2009
	Restaurants/Food Service	1.67 to 1.88	Urban/Periurban (WA)	Sonntag, 2008
	Restaurant Buying Local	1.90	Urban (IA)	Swenson, 2010, 2011
	Farm to School (Lunches)	1.86	Urban (OR)	Kane et al, 2009
	Farm to School (Lunches)	1.87	Urban (OR)	Ecotrust, 2009
	SNAP Incentives	1.80	National Average	Hanson, 2010
	<b>Segment Average (minus hi/lo)</b>	<b>1.94</b>		

## Total Multiplier Effect for

Processing, Distribution and Retail/Consumption

**6.31**

Source: Local Impact Output Multipliers by Supply Chain Segment for Local foods, 2013, Wallace Center



# Food Sovereignty and Community Gardens



## Community Food Systems Strategy

Thunder Valley CDC will acquire resources to look at community food systems strategies for the region to increase food security and food sovereignty issues. This study will look at the dollars that flow off the Oglala Lakota Nation for food and where that food comes from. This research will directly inform a strategy to create a better food system for the Oglala Nation, which could result in a grocery store, food distribution center, a food hub, commercial green house and other projects within the Regenerative Community Development at Thunder Valley.



## Food Sovereignty

The Lakota of the northern plains thrived for centuries as a self-sustaining community. The Lakota utilized the bountifulness of our local environment to provide sustenance of food and shelter, meeting the basic needs of the community. In modern times 95 percent of food and basic goods are hauled onto the Oglala Lakota Nation by truck perpetuating a phenomenon known as a “food desert” (a geographic location with little or no access to large grocery stores that offer fresh and affordable foods needed to maintain a healthy diet). Often the food that is sold locally is expensive and comprised of more ‘junk foods’ than foods that promote optimal health. Food deserts disproportionately affect socially segregated groups, specifically single mothers, children and elderly living in underprivileged neighborhoods. Families and individuals without a car are also at a higher disadvantage in terms of their access to healthy food in food deserts. The closest access to an affordable, variety of foods may be two hours away in Rapid City, or more expensively found in border towns adjacent to tribal nation homelands.

Statistically, infant mortality and early death in Indian Country are some of the worst in the world. Diabetes, heart disease and other diet-related health challenges are at epidemic proportions on the Oglala Lakota Nation. Encouraging is the fact that in community conversations facilitated by Thunder Valley CDC, we find our community is ready to work towards eliminating the existing ‘food desert’ found on the Oglala Lakota Nation.



## Thunder Valley CDC Community Garden

Thunder Valley CDC Community Garden in doing our part to address these challenges offer a seasonal organic community garden nurtured by community volunteers, summer youth and TANF workers as well as staff members. Our produce is offered to those who work the garden, elders and available to anyone stopping by asking for produce.

Community gardens, fruit trees and green houses are included into the design of the Thunder Valley Regenerative Community as we look to set a positive example of ways to not only address a void in our dietary needs, but to help rebuild the concept of what sustainability means to our community, families and individuals.

[www.thundervalley.org/programs/food-sovereignty-community-gardens/](http://www.thundervalley.org/programs/food-sovereignty-community-gardens/)

# SDSU: Beginning Farmer and Rancher Program

**Garden:** In the SDSU Extension 2009 Annual Report of Accomplishments, it was reported that there is severely limited access to fresh vegetables on many South Dakota reservations. Collaborative programs in planting, harvesting, and storage were needed to improve local diet options and self-sufficiency among Native Americans. School garden projects involve students learning how to plant and care for a garden, the health benefits of vegetables, and the environmental impact of plants and gardening.

**Ranchers Workshop:** Tribal University, SDSU, Extension, Conservation and several organizations conduct the annual Rancher’s Workshops that emphasize financial planning, along with tools for grazing management, family issues, and local

invasive weeds and pests. Educational booths and local vendor’s exhibits for the ranchers to visit are featured in a trade show to offer individual learning and assistance throughout the day.

**Beginning Farmer and Rancher Development Program (BFRDP):** BFRDP was developed to help U.S. farmers and ranchers who have been farming or ranching for 10 or fewer years using education, training, technical assistance and outreach programs. Grant funds are used to create training opportunities that will foster an increase of the number of producers. Topics address business planning, horticulture skills, gardening and food safety. The curriculum can be adapted to include livestock. The 2-year horticulture program (2014-2016) attracted 20 growers.

## Expertise

### SDSU Extension Leadership

**Barry H. Dunn**  
South Dakota Corn Utilization Council  
Endowed Dean, SDSU Extension Director

**Shawn Burke**  
Native American Program Director

**Alvaro Garcia**  
Agriculture and Natural Resources  
Program Director

**David Olson**  
Community Development  
Program Director

**Suzanne Stluka**  
Food and Families Program Director

**Amanda Blair**  
Associate Professor and SDSU Extension  
Meat Science Specialist

**Shawn Burke**  
Native American Program Director

**Rhoda Burrows**  
Professor and Horticulture Specialist

**Roger Gates**  
Professor and Rangeland Management Specialist

**Christopher Graham**  
Extension Agronomist

**Ken Olson**  
Professor and Beef Specialist

**Jason Schoch**  
Beginning Farmer and Rancher Program Manager

### SDSU Extension Regional Centers

- Agronomy Field Specialist
- Climate Field Specialist
- Cow/Calf Field Specialist
- Community Development Field Specialist
- Crops Business Management Field Specialist
- Forages Field Specialist
- Livestock Business Management Field Specialist
- Nutrition Field Specialist
- Plant Pathology Field Specialist
- Range Field Specialist
- Sheep Field Specialist
- Soils Field Specialist
- Water Resources Field Specialist



## **SDSU Extension Campus-Based Staff**

### **John Ball**

Professor and SDSU Extension Forestry Specialist

### **Emmanuel Byamukama**

Assistant Professor and SDSU Extension  
Plant Pathologist

### **Joe Darrington**

SDSU Extension Livestock Environment Associate

### **Matthew Diersen**

Professor and SDSU Extension Risk/Business  
Management Specialist

### **Matthew Elliott**

SDSU Extension Agribusiness Specialist

### **Heidi Carroll**

SDSU Extension Livestock Stewardship Associate

### **Alvaro Garcia**

SDSU Extension Agriculture and Natural Resources  
Program Director

### **Kathy Grady**

Assistant Professor and SDSU Extension  
Oilseeds Specialist

### **David Graper**

SDSU Extension Horticulture Specialist  
and South Dakota Master Gardener Program  
Interim Coordinator

### **Joan Hegerfeld-Baker**

Assistant Professor and SDSU Extension  
Food Safety Specialist

### **Jeff Held**

Professor and SDSU Extension Sheep Specialist

### **Larry Holler**

Professor and Veterinarian/Pathologist

### **Paul O. Johnson**

SDSU Extension Weed Science Coordinator

### **Van Kelley**

Ag and Biosystems Engineering Department Head

### **Jonathan Kleinjan**

SDSU Extension Crop Production Associate

### **Amber Letcher**

Assistant Professor and SDSU Extension  
4-H Youth Development Specialist

### **George Perry**

Professor and SDSU Extension Beef Reproductive  
Management Specialist

### **Peter Sexton**

Associate Professor and SDSU Extension  
Sustainable Cropping Systems Specialist

### **Sandy Smart**

Professor and SDSU Extension  
Rangeland Management Specialist

### **Bob Thaler**

PAS Professor and SDSU Extension  
Swine Specialist

### **Dennis Todey**

SD State Climatologist and SDSU Extension  
Climate Specialist

### **Adam J. Varenhorst**

SDSU Extension Entomology Specialist

### **Matt Vukovich**

Health and Nutritional Sciences Department Head

### **Julie Walker**

Associate Professor and SDSU Extension  
Beef Specialist

## **Pine Ridge Tribal Extension Office**

### **Aminah Hassoun**

4-H Youth Program Advisor

### **iGrow website**

Gardens - Home and Garden Pests, Trees  
and Forests, Gardening, Master Gardeners

<http://igrow.org/gardens/>

<http://igrow.org/about/our-experts>

# Oglala Lakota College



The tribe founded Oglala Lakota College (OLC) in 1971. It is an accredited tribal college, one of the first in the nation, and is classified as a land-grant college, per 1994 U.S. Congressional designation of tribal colleges. Starting as a 2-year community college, it has since expanded to offer 4-year baccalaureate degrees, as well as a master's in Lakota leadership. OLC, located in Kyle, South Dakota, has an enrollment of more than 1,400 part and full time students. The college is operated by tribal members, with a tribal board.

## Oglala Lakota College Agriculture Extension Department

✉ Piya Wiconi Road  
P.O. Box 490  
Kyle, SD 57752

☎ **Main Office Phone:** (605) 455-6085  
**Fax:** (605) 455-2411

💻 **Website:**  
[http://www.olc.edu/local\\_links/ag/](http://www.olc.edu/local_links/ag/)

## Contact Information

**Leslie Rae Henry**  
Ag Extension Director  
lhenry@olc.edu

**Theresa Lone Hill**  
Ag Adm. Assistant/Field Educator  
tloneh@olc.edu

We provide technical assistance to gardeners in the following capacities:

- Youth and School Enrichment Educational Activities
  - ▷ Youth Garden at OST-JDC Program
  - ▷ Oyate Techa Project: Garden and Food Preservation Workshops
  - ▷ Pine Ridge High School Dorm After School Programming
  - ▷ Wounded Knee: In School Agriculture Science Programming
  - ▷ Youth Garden at RST-JDC Project Green Program
  - ▷ Little Wound School FACE Program
  - ▷ OLC Headstart Program: Tree Planting and Three Sisters Garden Curriculum
- Community Gardening Workshop/Seminar Trainings Available at OLC College Centers
  - ▷ Tree Planting
  - ▷ Garden Planning and Design
  - ▷ Technical Assistance to World War II Victory Gardeners
  - ▷ Other topics upon request of community members
- Community Food Preservation Workshop/Seminar Trainings Available at OLC Centers
- Community technical assistance available upon request
  - ▷ Assist gardeners to explore issues for answers to their gardening problems, such as soil fertility, drainage problems, insect identification, and weed identification
- Distribution of seeds when available from donations to the college
- Annual Wazi Paha Fall Festival: community gardening and cultural activities and competitions. Following traditional Native American vegetables judged for prizes, such as hot peppers, sweet peppers, corn, potatoes, tomatoes, summer squash, winter squash, and mixed veggie basket display. Usually last weekend of August or first part of September.





# Oglala Lakota College

## Math, Science & Technology

*"Learning Math, Science & Technology While Honoring Lakota Values"*

---

### Oglala Lakota College Math, Science and Technology Department



#### K-12 STEM Outreach Program

Piya Wiconi Road, P.O. Box 490  
Kyle, SD 57752



**Main Office Phone:** (605) 455-6094



#### Website:

[http://www.olc.edu/local\\_links/smet/](http://www.olc.edu/local_links/smet/)

---

### Contact Information

#### Karla Witt

Chair, Department of Math, Science, and  
Technology

[kwitt@olc.edu](mailto:kwitt@olc.edu)

#### Michelle Salvatore

NASA-SEMAA and Woniya Sa  
K-12 Outreach Director

[msalvatore@olc.edu](mailto:msalvatore@olc.edu)

#### Jesse Pina

AEL Manager/SEMAA Asst. and Tech

[jpina@olc.edu](mailto:jpina@olc.edu)

We provide technical assistance to K-12 youth and their educators in the following capacities:

- Youth and School Outreach Educational Activities

- ▷ Summer Cultural Camps
- ▷ OLC Science Career Days
- ▷ Youth Educator Science and Math Training  
[http://www.olc.edu/local\\_links/smet/teacher\\_resources/](http://www.olc.edu/local_links/smet/teacher_resources/)
- ▷ NASA-Science Engineering Mathematics Aerospace Academy (SEMAA)  
<http://www.nasa.gov/offices/education/programs/national/semaa/home/index.html>
- ▷ American Indian Science and Engineering Society (AISES) <http://www.aises.org/>
- ▷ Oglala Lakota Center for Science and Technology (OLCST)
- ▷ Math and Science Faculty  
[http://www.olc.edu/local\\_links/smet/faculty/index.php](http://www.olc.edu/local_links/smet/faculty/index.php)

# Buffalo Cooperative

## Lakota Buffalo Caretakers Launch Retail Meat Sales

**January 12, 2009 by David Bartecchi**

This weekend, the Lakota Buffalo Caretakers Cooperative launched retail sales of packaged grass-fed buffalo meat raised on the Pine Ridge Reservation. The Lakota Buffalo Caretakers Cooperative (LBCC) is a 100% Native American owned and operated cooperative association on the Pine Ridge Reservation in South Dakota. Its membership is made up of small family buffalo caretakers who respect the buffalo and the land.

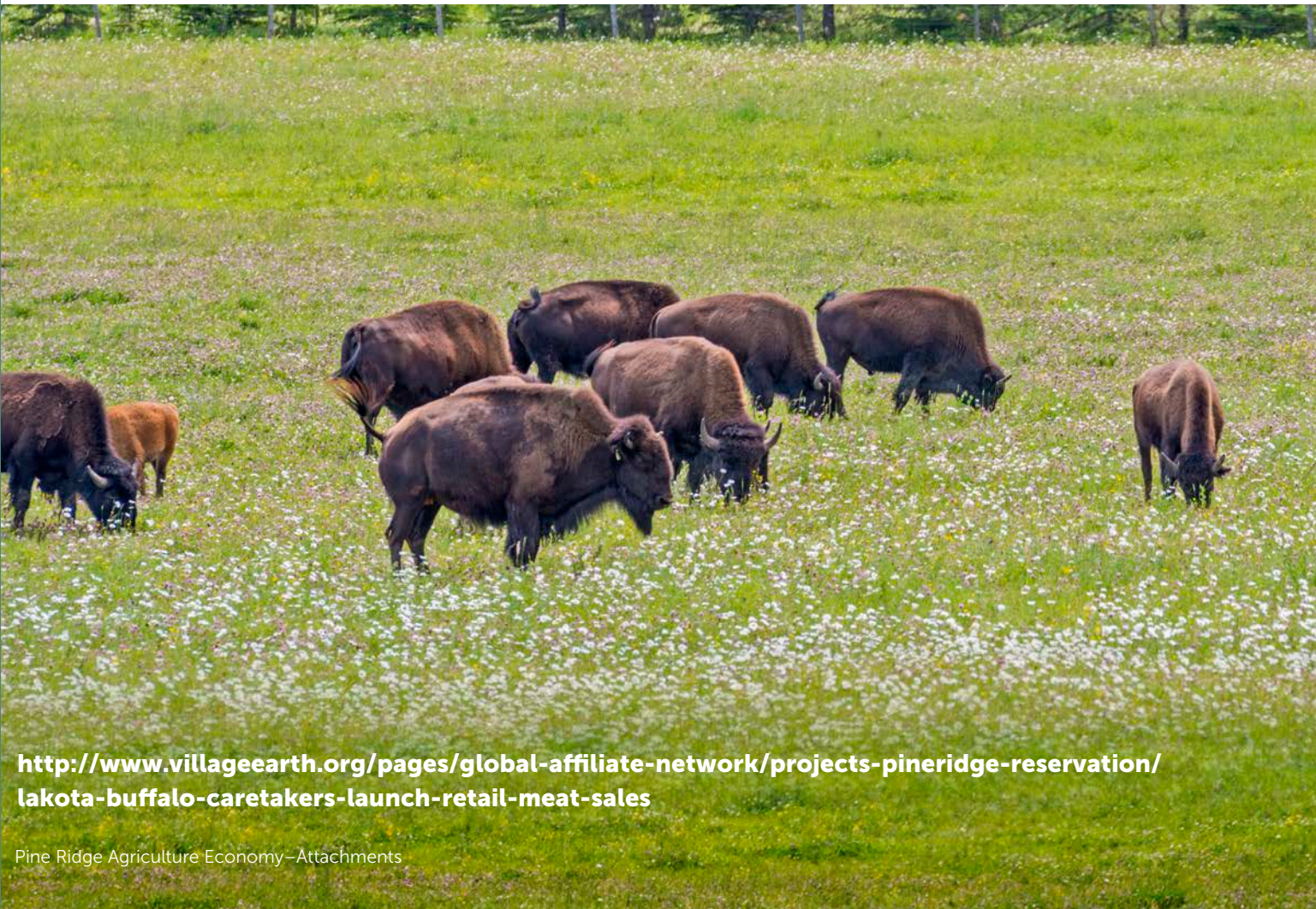
Buffalo raised by members:

- Live on open ranges, never in feedlots
- Eat wild grasses their entire lives
- Are free from antibiotics and hormones
- Respectfully harvested in the field

Members of the LBCC are committed to the restoration of the northern plains ecology,

self-sufficiency and strengthening the sovereignty and self-determination of the Oglala Lakota Nation and all indigenous peoples. To the best of our knowledge, the LBCC is the only Native American run cooperative of small family buffalo caretakers in the United States.

Village Earth helped to establish the LBCC starting in 2007. The LBCC was officially incorporated in South Dakota in August of 2008. The LBCC has partnered with the Fort Collins based Allied Natural Meats, LLC, which will function as its fair-trade distribution partner. The LBCC currently has the capability to ship wholesale orders throughout the country. However, at this time, the LBCC and Allied Natural Meats, LLC are only set up to do online retail sales in the Fort Collins, Colorado area but hope to be selling national via mail order soon. For more information, please visit the LBCC website at [www.manataka.org/page1026.html](http://www.manataka.org/page1026.html).



<http://www.villageearth.org/pages/global-affiliate-network/projects-pineridge-reservation/lakota-buffalo-caretakers-launch-retail-meat-sales>





## Our Mission

Lakota Funds' mission is to promote economic sustainability on the Pine Ridge Reservation and geographic service area, through business loans, technical assistance, and wealth building education for families and businesses.

### Our History

In the 1980's a group of visionary community leaders assembled and realized that in order to break the cycle of poverty on the Pine Ridge Indian Reservation, they needed to focus on the key roadblocks to economic development: access to capital, access to technical assistance, access to business networks, and access to infrastructure. With assistance from Oglala Lakota College and First Nations Development Institute, Lakota Funds was established in 1986 as the first Native American CDFI and began working to break through these roadblocks.

Starting out as a micro lender modeled after the Circle Banking Project in Bangladesh, we began little by little helping entrepreneurs on the Pine Ridge Reservation realize their dreams through \$500 loans. At this time there were only two Native American-owned businesses on the Pine Ridge Indian Reservation. Eighty-five percent of our clients never had a checking or savings account; seventy-five percent never had a loan; and ninety-five percent had no business experience.

Read our **Best Practices Guide** for insight to the Lakota Funds history, products and services, and strategies for success as never seen before.

### Lakota Funds Today

Today, Lakota Funds continues plays a vital role in improving life for Oglala Lakota people by placing capital with new and growing businesses on the Pine Ridge Indian Reservation. Our loan portfolio now exceeds \$7 million and our maximum loan

size has grown to \$300,000. Since 1986, we have helped thousands of artists and aspiring entrepreneurs, created over 1,400 permanent jobs, and helped establish hundreds of businesses.

Download one of our annual reports to find out more about our community impact and loan portfolio performance.

- 2012 Annual Report
- 2013 Annual Report
- 2014 Annual Report

In addition, Lakota Funds continuously strives to improve our products and services to best meet the needs of our target market. In 2012, we commissioned First Nations Oweesta Corporation to conduct an in depth market study, which revealed there is a strong market demand but many barriers that prevent a rapid pace of business start-up and expansion.

[http://lakotafunds.org/docs/Lakota\\_Funds\\_2012\\_Market\\_Study\\_Final\\_Report.pdf](http://lakotafunds.org/docs/Lakota_Funds_2012_Market_Study_Final_Report.pdf)

While many of our accomplishments may seem great, Lakota Funds has only begun our journey of transforming the economic landscape on the Pine Ridge Indian Reservation. There are still only 13 businesses per 1,000 reservation residents, compared to 83 businesses per 1,000 people in the rest of South Dakota. Unemployment is estimated in the 80 percent range, and Shannon County maintains one of the highest poverty levels in the nation. With the help of valued funders, investors, and community members we continue to strive towards a thriving economy.

[www.lakotafunds.org](http://www.lakotafunds.org)



**United States  
Department of  
Agriculture**

## Rural Development

Food Production, Processing, Marketing Service Sampling



<http://www.usda.gov/wps/portal/usda/usdahome?navid=TOPICS>

<http://blogs.usda.gov/tag/food-systems/>

### Assisting Rural Communities

- Cooperatives
- Disaster Assistance
- Grants and Loans
- Insurance Programs
- Telecommunications Programs

### Food and Nutrition

- Child Nutrition Programs
- Expanded Food & Nutrition Education Program
- Food Security
- National Organic Program
- SNAP
- WIC

### Conservation

- Conservation
- Environmental Markets
- Wildfire Prevention

### Highlighted Initiatives

- Farm Bill
- Healthier Next Generation
- Know your Farmer, Know your Food
- New Farmers
- The People's Garden
- StrikeForce for Rural Growth

### Education and Research

- Agricultural Research
- Agricultural Statistics
- Economic Research
- Food and Agriculture Research

### Marketing and Trade

- Exporting Goods
- Importing Goods

### USDA Rural Development

#### Programs and Services for Businesses

- Business and Industry Loan Guarantees
- Intermediary Relending Program
- Rural Business Development Grants

#### Programs and Services for Communities and Nonprofits

- Community Facilities Direct Loan and Grant
- Rural Business Development Grants
- Community Facilities Guaranteed Loan

#### Programs and Services for Lenders

- Single Family Housing Guaranteed Loan
- Business and Industry Loan Guarantees
- Community Facilities Guaranteed Loan
- Intermediary Relending Program
- Rural Energy for America Program Energy Audit and Renewable Energy Development Assistance Grants

#### Programs and Services for Tribes

- Water and Waste Disposal Loan and Grant
- Community Facilities Direct Loan and Grant
- Tribal College Initiative Grants

<http://www.rd.usda.gov/programs-services>



## Community Food Systems and Civic Agriculture

### Farms and Community

- Women and Minorities in Agriculture
  - ▷ Minority Issues
  - ▷ Gender Issues
- Beginning/New Farmers
- Community Food Systems/Civic Agriculture
- Community Gardening
- Small Farms
- Grants and Loans for Farmers
- Farmland Preservation

### Browse by Subject

- Grazing Systems/Alternative Livestock Breeds
- Organic Production
- Farms and Community
- Sustainability in Agriculture
- Soil and Water Management
- Alternative Marketing and Business Practices
- Aquaculture and Soilless Farming
- Alternative Crops and Plants
- Education and Research
- Energy
- Ecological Pest Management

<http://afsic.nal.usda.gov/farms-and-community/community-food-systems-and-civic-agriculture>

### Nutrition Assistance Programs

- Food Labeling
- Food Safety
- Food Security
- USDA Quality Standards
- Food and Nutrition Blogs

### Resources

- ChooseMyPlate
- Dietary Guidelines for Americans
- Farmers Markets
- FoodSafety.gov
- Gov Benefits
- Know Your Farmer, Know Your Food
  - Healthy Food Access
- Nutrition.gov
- Summer Food Service Program
- Team Nutrition Initiative

<http://www.usda.gov/wps/portal/usda/usdahome?navid=food-nutrition>

## Food and Nutrition Service | Food Distribution | FD Food Safety

### Programs and Services

- USDA Foods Processing
- Commodity Supplemental Food Program (CSFP)
- DoD Fresh Fruit and Vegetable
- Nutrition Services Incentive Program (NSIP)
- Child Nutrition USDA Foods Programs
- Food Distribution Program on Indian Reservations (FDPIR)
- The Emergency Food Assistance Program (TEFAP)

### Food Distribution Resources

- USDA Foods Available Lists
- Fact Sheets
- State Contacts
- WBSCM Information
- FFAVORS
- Instructions and Handbooks
- Policy
- Regulations
- Legislation
- Federal Register Documents
- Pilot Project
- Research - FD Studies
- FDD Management Evaluation Modules
- Commodity Alert System
- Disaster Assistance
- Food Ordering Resources
- Food Purchase Resources
- Specifications
- USDA Foods Complaints
- Food Safety
- Hold and Recall Procedures
- Reports

<http://www.fns.usda.gov/fdd/fd-food-safety>

### Food Safety and Inspection Service

- Compliance Assistance
- Contact Centers
- Cooperative Agreements
- Email Subscription Service
- Exporting Products
- Federal Grant of Inspection Guide
- Importing Products
- Inside FSIS, for Employees
- Label Submission Approval System
- Public Health Information System
- U.S. Codex Office

<http://www.fsis.usda.gov/wps/portal/fsis/home>



**United States  
Department of  
Agriculture**

## Natural Resource Conservation Service Programs (NRCS)

NRCS's natural resources conservation programs help people reduce soil erosion, enhance water supplies, improve water quality, increase wildlife habitat, and reduce damages caused by floods and other natural disasters.

- How to obtain a DUNS Number and sign up with System for Award Management (SAM)
- NRCS provides entities a starting point to **obtain a DUNS Number and manage a SAM account**
- Funding opportunities available from NRCS Programs
- NRCS provides **funding opportunities for agricultural producers and other landowners** through these programs
- NRCS Conservation Program Data, FY 2009-FY 2014
- NRCS provides **program-specific reports in the RCA Interactive Data Viewer**

Public benefits include enhanced natural resources that help sustain agricultural productivity and environmental quality while supporting continued economic development, recreation, and scenic beauty.

### Conservation Technical Assistance Program and Activities

- Conservation of Private Grazing Land
- Conservation Reserve Program (administered by USDA Farm Service Agency)
- Conservation Technical Assistance
- Grazing Lands Conservation Initiative
- State Technical Committees

### Environmental Improvement Programs

- Agricultural Management Assistance
- Cooperative Conservation Partnership Initiative
- Environmental Quality Incentives Program
  - ▷ 2016 Conservation Activity Plans
  - ▷ 2015 Conservation Activity Plans
  - ▷ 2014 Conservation Activity Plans
  - ▷ 2013 Conservation Activity Plans
  - ▷ Agricultural Water Enhancement Program (AWEP) (not reauthorized under 2014 Farm Bill)
  - ▷ EQIP Initiatives Overview
    - EQIP Air Quality Initiative
    - EQIP On-Farm Energy Initiative
    - EQIP Organic Program Initiative
    - EQIP High Tunnel System Initiative
  - ▷ National Water Quality Initiative (NWQI)
  - ▷ Colorado River Basin Salinity Control
  - ▷ Conservation Innovation Grants
- Water Bank Program (WBP)
- Wildlife Habitat Incentive Program (not reauthorized under 2014 Farm Bill)
  - ▷ Working Lands for Wildlife

### Stewardship Programs

- 2015 Conservation Stewardship Program Payment for Performance
- 2015 Enhancement Activity Job Sheets
- Air Quality
- Animal
- Bundles
- Energy
- Plant
- Soil Erosion
- Soil Quality
- Water Quality
- Water Quantity
- National Focus Areas
- Supplemental Payment Activity
- Conservation Security Program Archive

### National Watershed Programs

- Emergency Watershed Protection Program
- Watershed and Flood Prevention Operations Program
- Watershed Surveys and Planning
- Watershed Rehabilitation Program

### Easement Programs

- Emergency Watershed Protection Program (Floodplain Easements)
- Farm and Ranch Lands Protection Program
- Grassland Reserve Program
- Healthy Forests Reserve Program
- Wetlands Reserve Program

### Community Assistance Programs and Activities

- Farmland Protection Policy Act
- Small, Limited, and Beginning Farmer Assistance
- Tribal Government Assistance

### Technical Processes, Tools, and Other Technical Resources

- Conservation Planning
- Customer Service Toolkit
- Limited Resource Farmer/Rancher Self-Determination Tool
- National Environmental Policy Act (NEPA) Documents
- Rapid Watershed Assessment

### Conservation Issues and Strategies

- Animal Feeding Operations
- Nutrient and Pest Management

### Resource Inventory and Assessment

- Conservation Effects Assessment Project
- National Resources Inventory
- Snow Survey and Water Supply Forecasting
- Soil Survey Program

<http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/#>



# Environmental Quality Incentives Program (EQIP)

The EQIP is a voluntary program that provides financial and technical assistance to agricultural producers through contracts up to a maximum term of ten years in length.

These contracts provide financial assistance to help plan and implement conservation practices

that address natural resource concerns and for opportunities to improve soil, water, plant, animal, air, energy conservation, and related resources on agricultural land and non-industrial private forestland. In addition, a purpose of EQIP is to help producers meet Federal, State, Tribal and local environmental regulations.

## The Initiatives



**Air Quality Initiative:** NRCS helps producers address air quality concerns on their operations. Assistance includes establishing cover crops, planting windbreaks, implementing nutrient management practices and applying other conservation measures that mitigate and prevent air quality problems. Conservation practices installed through this initiative reduce airborne particulate matter and greenhouse gases and conserve energy.



**On-Farm Energy Initiative:** NRCS and producers develop Agricultural Energy Management Plans (AgEMP) or farm energy audits that assess energy consumption on an operation. NRCS then uses audit data to develop energy conservation recommendations. Each AgEMP has a landscape component that assesses equipment and farming processes and a farm headquarters component that assesses power usage and efficiencies in livestock buildings, grain handling operations, and similar facilities to support the farm operation.



**High Tunnel System:** NRCS helps producers plan and implement high tunnels: steel-framed, polyethylene-covered structures that extend growing seasons in an environmentally safe manner. High tunnel benefits include better plant and soil quality, fewer nutrients and pesticides in the environment, and better air quality due to fewer vehicles being needed to transport crops.



**Organic Initiative:** The Organic Initiative provides financial assistance to implement a broad set of conservation practices to assist organic producers and producers transitioning to organic production in addressing resource concerns. This includes: developing a conservation plan, establishing buffer zones, planning and installing pollinator habitat, improving soil quality and organic matter while minimizing erosion, developing a grazing plan and supportive livestock practices, improving irrigation efficiency, and enhancing cropping rotations and nutrient management.

## NRCS Announces Program Sign Up for EQIP

Applications for the EQIP are batched annually for funding consideration. October 16, 2015, is the date by which an operator or landowner must sign an application at their local NRCS office for FY 2016 funding consideration, according to Jennifer Wurtz, EQIP Program coordinator, with the NRCS.

The EQIP provides financial and technical assistance to help farmers and ranchers voluntarily implement conservation practices to improve natural resources on working agricultural lands. Payment is provided for a variety of practices to address resource concerns such as water quality, grazing land health and productivity, soil erosion and soil quality, and wildlife habitat development.

Applications for all NRCS conservation programs are accepted continuously, however the application batching date, or call for ranking, for FY 2016 EQIP funds is October 16, 2015. Wurtz says, "The batching deadline for this popular conservation program comes around quickly. I encourage any operator or landowner to apply early, not wait, and visit your local NRCS Office to work on the development of a conservation plan. Having a conservation plan in place will aid in the development of a conservation program application down the road."

For information about technical assistance and conservation programs, visit [www.nrcs.usda.gov/GetStarted](http://www.nrcs.usda.gov/GetStarted). For more information about the EQIP or to apply, please contact your local NRCS office.

[<http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/programs/financial/eqip/?&cid=stelprdb1047458>]



**United States  
Department of  
Agriculture**

## Farm Service Agency (FSA) Programs

### Serving Family Farmers, Cultivating Opportunities

FSA's farm loan programs are a valuable resource to establish, improve, expand, transition, and strengthen your farm or ranch. For more information about FSA's farm loan programs, please click on the applicable selections.

- Your Guide to Farm Loan Programs
- Farm Operating Loans
  - Operation Expenses
  - Livestock
  - Equipment
  - Feed
  - Seed
  - Fertilizer
- Emergency Farm Loans
  - Production Losses
  - Physical Losses
- Minority and Women Farmers and Ranchers
- Youth Loans
  - 4-H Projects
  - FFA Projects
  - Youth Farmers
- Microloans
  - Direct Farm Ownership
  - Direct Farm Operating
- Farm Ownership Loans
  - Purchase Farmland
  - Improvements and Repairs
  - Soils and Water Conservation
- Guaranteed Farm Loans
  - Farm Operating
  - Farm Ownership
- Beginning Farmers and Ranchers
- Farm Loans Applications Forms

### Related Topics

- FLP Connects
- Farm Operating Loans
- Farm Ownership Loans
- Emergency Farm Loans
- Guaranteed Farm Loans
- Minority and Women Farmers and Ranchers
- Beginning Farmers and Ranchers Loans
- Youth Loans
- Farm Loan Application Forms
- Funding
- Program Data
- Interest Rates
- Microloans Program

<http://www.fsa.usda.gov/programs-and-services/farm-loan-programs/index>



# USDA Improves Access to Capital for Tribal Farmlands with Multiple Owners

*New Program Allows More Farm Loans for “Highly Fractionated” Tribal Land*

**Release No. 0191.15** | [http://www.fsa.usda.gov/news-room/news-releases/2015/nr\\_20151201\\_rel\\_0191](http://www.fsa.usda.gov/news-room/news-releases/2015/nr_20151201_rel_0191)

WASHINGTON, Dec. 1, 2015—The U.S. Department of Agriculture (USDA) today announced that it is expanding the availability of farm loans for Indian tribes and members to purchase tribal farmland that has multiple owners. The improved lending opportunities are possible due to new authority granted by the 2014 Farm Bill, which allows USDA to provide revolving loan funds to qualified intermediary lenders that can relend the funds to qualified tribes and individuals. The program becomes available today, Dec. 1, 2015.

“Under the Obama Administration, we have strived to build a new era for civil rights at USDA and ensure all customers and employees are treated fairly. As part of this commitment, we have consulted with Indian tribes to improve USDA policies, including the new lending program we are announcing today,” said Val Dolcini Farm Service Agency (FSA) Administrator. “As a direct result of more than a dozen tribal meetings across the country, USDA is able to implement a solution to a longstanding barrier to financing, which will increase the availability of farm loans to Native Americans who want to start or expand a farming or ranching operation on Indian lands.”

Under the **1887 Dawes Act**, Indian reservation land was divided and allotted to individual tribal members such that with the passing of each generation, title ownership was divided and parceled among heirs, while the land was not. As a result, land once owned by a single person could today be owned by hundreds or thousands of individuals, resulting in what is known as “highly fractionated Indian land.” In many instances, landowners are unknown or cannot be located, which complicates the coordination of ownership or prevents the use of the property altogether. There are more than 245,000 owners of three million fractionated land interests, spanning approximately 150 Indian reservations.

Under the rules published today, USDA will now allow tribes and tribal members to submit a farm loan application to an intermediary lender. To participate, intermediary lenders first must be approved by USDA. The lenders may be private and tribal nonprofit corporations, public agencies, Indian tribes, or lenders subject to federal or state regulation (such as a credit union or other financial institution). FSA will lend to the intermediary, which will relend to the applicant. The intermediary lender also will administer the loan for the applicant.

Additional information on guidelines and criteria for intermediate lenders and how to file a loan application under Highly Fractionated Indian Land loan program will be shared Dec. 7, 2015 at the Intertribal Agriculture Council (IAC) meeting and Tribal consultation in Las Vegas, Nev. For more information, visit [www.fsa.usda.gov/farmloans](http://www.fsa.usda.gov/farmloans) or contact the local FSA county office. To find the local FSA office, visit <http://offices.usda.gov>.

USDA also has opened a 90-day period for the public to submit comments on this program. Written comments must be submitted by Feb. 29, 2016, at [www.regulations.gov](http://www.regulations.gov), using Regulation Identifier Number 0560-AI32.

This program was made possible by the 2014 Farm Bill, which builds on historic economic gains in rural America over the past six years, while achieving meaningful reform and billions of dollars in savings for taxpayers. Since enactment, USDA has made significant progress to implement each provision of this critical legislation, including providing disaster relief to farmers and ranchers; strengthening risk management tools; expanding access to rural credit; funding critical research; establishing innovative public-private conservation partnerships; developing new markets for rural-made products; and investing in infrastructure, housing and community facilities to help improve quality.

# USDA Expands Microloans to Help Farmers Purchase Farmland and Improve Property

*Producers, Including Beginning and Underserved Farmers, Have a New Option to Gain Access to Land*  
Release No. 0015.16 | [http://www.fsa.usda.gov/news-room/news-releases/2016/nr\\_20160119\\_rel\\_0015](http://www.fsa.usda.gov/news-room/news-releases/2016/nr_20160119_rel_0015)

WASHINGTON, Jan. 19, 2016 — Agriculture Deputy Secretary Krysta Harden today announced that the U.S. Department of Agriculture (USDA) will begin offering farm ownership microloans, creating a new financing avenue for farmers to buy and improve property. These microloans will be especially helpful to beginning or underserved farmers, U.S. veterans looking for a career in farming, and those who have small and mid-sized farming operations.

"Many producers, especially new and underserved farmers, tell us that access to land is one of the biggest challenges they face in establishing and growing their own farming operation," said Harden. "USDA is making it easier for new farmers to hit the ground running and get access to the land that they need to establish their farms or improve their property."

The microloan program, which celebrates its third anniversary this week, has been hugely successful, providing more than 16,800 low-interest loans, totaling over \$373 million to producers across the country. Microloans have helped farmers

and ranchers with operating costs, such as feed, fertilizer, tools, fencing, equipment, and living expenses since 2013. Seventy percent of loans have gone to new farmers.

Now, microloans will be available to also help with farm land and building purchases, and soil and water conservation improvements. FSA designed the expanded program to simplify the application process, expand eligibility requirements and expedite smaller real estate loans to help farmers strengthen their operations. Microloans provide up to \$50,000 to qualified producers, and can be issued to the applicant directly from the USDA Farm Service Agency (FSA).

This microloan announcement is another USDA resource for America's farmers and ranchers to utilize, especially as new and beginning farmers and ranchers look for the assistance they need to get started. To learn more about the FSA microloan program visit [www.fsa.usda.gov/microloans](http://www.fsa.usda.gov/microloans), or contact your local FSA office. To find your nearest office location, please visit <http://offices.usda.gov>.





# Value-Added Agriculture Development Center



The Value-Added Agriculture Development Center (VAADC) has provided education and technical assistance to individuals, groups and communities over the past decade. During that time, we have created a successful history of assisting in the development and expansion of agribusiness ventures that bring value to our agricultural producers and local-state economies.

The long-term support provided by our members and USDA is appreciated. Their commitment to creating and achieving our goals has been instrumental in the VAADC becoming established as the 'go to' place for agribusiness development in South Dakota.

The VAADC also appreciates the collaboration of our partners who provide ancillary services and strategy to adequately address each phase of project development.

Our clients who bring their ideas to develop cooperatives and other types of businesses that enhance the quality of traditional commodities and spur the introduction of new products are the reason the VAADC exists. The VAADC remains dedicated to helping you bring your ideas and expansion plans to fruition.

## About Us

### What is the ValueAdded Ag Center Mission?

*Foster creation of value-added concepts.*

### What is the ValueAdded Ag Center?

The ValueAdded Agriculture Development Center (VAADC) is funded by sixteen producer based ag commodity groups, trade organizations and cooperatives dedicated to the development of value-added agricultural businesses in South Dakota.

### What Services does the ValueAdded Ag Center Provide?

- The VAADC provides services to new and existing agri-businesses.
- The VAADC facilitates Project Development Steps  
The VAADC provides education to projects, partners and the public
- The VAADC provides Technical Assistance Services
  - ▷ Project Management      ▷ Education
  - ▷ Feasibility Assessment      ▷ Funding Access
  - ▷ Business Planning      ▷ Applied Research
  - ▷                                      ▷ Networking

### How Can the ValueAdded Ag Center Help You?

The VAADC fits into your value-added business idea where we can be of assistance. Since 1999, the VAADC has been involved in various educational and training programs, participated in numerous producer project meetings and is working with approximately 30 value-added agriculture projects on an ongoing basis across the state. Our goal is to help you facilitate and evaluate your value-added business venture and ***make YOUR idea a reality.***

[www.sdvalueadded.coop](http://www.sdvalueadded.coop)

## Develop Your Business Plan

To get started go to [www.sdvalueadded.coop/profile/](http://www.sdvalueadded.coop/profile/) and register.



## Buffalo Resource Cooperative

### Buffalo Production Resource Entity

As buffalo demand rises, so does the need for ranchers. Sales of buffalo meat, much like that of beef steaks, have risen in recent years as more consumers seek red meat options lower in fat and cholesterol. A shortage of buffalo is sustaining prices at record high levels, making it difficult for meat and value-added meat companies to afford and secure product. For example, while Native American Natural Food's Tanka meat snacks market is nearly doubling on an annual basis, the company is challenged with locating available buffalo, additional trucking costs, elevated meat cost and seeking alternative recipes to substitute other less expensive ingredients for buffalo.

The solution to this shortage of buffalo meat is to recruit more people into the buffalo business—the proposed buffalo resource entity has a solution that provides support to existing and new ranchers. The plan for this small emerging business is to deliver technical assistance, training and funding to ranchers allowing their operations to ratchet up the meat supply.

This endeavor will result in development of small and emerging businesses and many start-up and expanded producer operations in rural

areas, specifically near Kyle, South Dakota. As an indirect impact, the company will help sustain buffalo meat processors and value-added buffalo companies by producing more buffalo to meet market demand.

The Value-Added Agriculture Development Center is heading up the project, overseeing industry consultant contributions and providing USDA RD funds to 1) identifying business structure best suited to company operations; 2) researching funding sources that fit company goals, then determining how they can be coupled to create a funding package; and 3) defining client base along with existing/prospect buffalo producer needs then incorporating findings into a program.

Service providers will address various aspects of the complex proposed Buffalo Entity structure to compile details that will be used in subsequent business plan development: new/expanding buffalo producer needs analysis, attention to land ownership/lease/purchase/Tribal/Trust particulars and discovery/creation of resource programs. Establishing a strong foundation not only requires an in-depth look at each of these areas, but also developing strategy for funding anticipated income from various sources.



Pine Ridge is a vibrant place with incredible people.  
Our culture, language, and Tiospayes are a source of strength.  
We are deeply connected to the earth and to each other.  
We have accomplished a great deal.  
There is spirit in our work.  
–Unknown



United States  
Department of  
Agriculture

January 2017

USDA is an equal opportunity provider, employer, and lender.